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Scientific Investigation/ Survey at Settlement Plot No. 9130, District Varanasi

(Report submitted to the Hon'ble District Court, Varanasi)

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Archaeological Survey of India
2023



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Settlement Plot No. 9130, District Varanasi

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Volume 1

Structures



Archaeological Survey of India
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Court Directives and Compliance



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Court Directives and Compliance

On 21.07.2023, Hon'ble District Court, Varanasi, in O.S. No. 18/2022, ordered Director of Archaeological Survey of India to conduct the scientific investigation/ survey/ excavation at the disputed site i.e. the settlement plot no. 9130, excluding the areas sealed by orders passed by the Hon'ble Supreme Court of India, dated 17.05.2022, 20.05.2022 as well as vide order dated 11.11.2022 in SLP (C) No. 9388/2022.

Directions of the Hon'ble District Court, Varanasi

"(a) The Director of ASI is directed to undertake the scientific investigation/ survey/ excavation at the property in question i.e. at Settlement Plot No. 9130 in the case excluding the areas sealed by the Hon'ble Supreme Court vide order dated 17.05.2022, 20.05.2022 as well as vide order dated 11.11.2022 in SLP(C) No.9388/2022 titled as Committee of Management Anjuman Intejamia Masajid Varanasi vs. Rakhi Singh & Ors.;

(b) The Director of ASI is also directed to conduct a detailed scientific investigation by using GPR Survey, Excavation, Dating method and other modern techniques of the present structure to find out as to whether same has been constructed over a pre-existing structure of Hindu temple;

(c) The Director of ASI is also directed to conduct scientific investigation in the light of the averment made in this application after associating the Plaintiffs, Defendants and their respective counsels and submit report to this Hon'ble Court upto 04-08-2023 and also to photograph and videograph the entire survey proceedings;

(d) The Director of ASI is also directed to investigate the age and nature of construction of the western wall of the building in question through scientific method(s);



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(e) The Director of ASI is also directed to conduct Ground Penetrating Radar (GPR) survey just below the 3 domes of the building in question and conduct excavation, if required:

(f) The Director of ASI is also directed to conduct Ground Penetrating Radar (GPR) survey beneath the western wall of the building and conduct excavation, if required;

(g) The Director of ASI is also directed to conduct Ground Penetrating Radar (GPR) survey beneath the ground of all the cellars and conduct excavation, if required;

(h) The Director of ASI is also directed to prepare a list of all the artefacts which are found in the building specifying their contents and carry out scientific investigation and undertake dating exercise to find out the age and nature of such artefacts;

(i) The Director of ASI is also directed to conduct dating exercise of the pillars and plinth of the building to find out the age and the nature of construction;

(j) The Director of ASI is also directed to conduct GPR survey, excavation wherever required, dating exercise and other scientific methods for determining the age and nature of construction existing at the site in question;

(k) The Director of ASI is also directed to investigate the artefacts and other objects of historical and religious importance existing in different parts of the building and also beneath the structure which may be found during such exercise;

(l) The Director of ASI is also directed to ensure that there should be no damage to the structure standing on the disputed land and it remains intact and unharmed. Report will be submitted up to 04-08-2023. Put up on 04-08-2023 for further proceedings."



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Scientific Investigation/ Survey by the ASI

In compliance of the order dated 21.07.2023, Archaeological Survey of India started the survey work w.e.f. 24.07.2023 (morning).

Against the order of the Hon'ble District Court, Varanasi regarding scientific investigation/ survey at settlement plot no. 9130, an SLP(C) No. 14853/2023 was filed before the Hon'ble Supreme Court of India by the Committee of Management Anjuman Intezamia Masajid, Varanasi. The Hon'ble Supreme Court issued an order dated 24.07.2023 to maintain the status quo and the impugned order passed by the Hon'ble District Court shall not be enforced up to 26.07.2023. The Archaeological Survey of India ensured the implementation of the directions passed by the Hon'ble Supreme Court of India and stopped the scientific investigation/ survey work on 24.07.2023 (noon).

The petitioner, i.e. Committee of Management Anjuman Intezamia Masajid, Varanasi filed a petition no. 7955 / 2023 under Article 227 of the Constitution of India in Hon'ble High Court of Allahabad challenging the order dated 21.07.2023 passed by the Hon'ble District Judge, Varanasi in O.S. No. 18 / 2022 (693/2021) (Rakhi Singh & others. Vs. State of Uttar Pradesh & Ors.). While hearing the case, Hon'ble court sought expert's opinion and Additional Director General, ASI appeared, to assist the court and submitted an affidavit. On 03.08.2023, the Hon'ble High Court of Allahabad pronounced its verdict affirming the order of the District Court. The operative portion of the order/ judgement passed by the Hon'ble High Court reads as under.

"25. The petition is, accordingly, dismissed. Interim order, if any, stands vacated. The order dated 21.07.2023 passed by the District Judge, Varanasi is restored and the parties are to comply the said order, subject to the observation made by this Court herein above and the contents of the affidavit filed on behalf of the ASI before this Court."

In compliance of the order, Archaeological Survey of India resumed scientific investigation/ survey from 04.08.2023 as per the directions contained in the order



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of the Hon'ble High Court (03.08.2023) and the Hon'ble District Court (21.07.2023).

Being aggrieved of the order/ judgement dated 03.08.2023 passed by the Hon'ble High Court, Allahabad the petitioner, Anjuman Intezamia Masajid, Varanasi challenged the above order on 04.08.2023 before Hon'ble Supreme Court of India by the means of Special Leave Petition (Civil) – Diary No. 31345 / 2023.

The Hon'ble Supreme Court passed an order on 04.08.2023 and disposed of the petition filed by the petitioner. Hon'ble Apex court upheld the orders passed by the Hon'ble High Court, Allahabad and Hon'ble District court, Varanasi and reiterated that as per the submission/ affidavit of ASI, survey shall not involve any excavation at the site or any damage to the existing structure.

As the survey work was suspended from 24.07.2023 (noon) to 03.08.2023, ASI submitted an application before the Hon'ble District Court seeking four weeks' time for the survey work. The Hon'ble District Court granted 4 weeks' time (up to 02.09.2023) for carrying out the survey work vide order dated 05.08.2023.

Archaeological Survey of India submitted application no. 374-C before the Hon'ble District Court seeking further eight weeks extension of time. The Hon'ble District Court partially accepted the application and granted four weeks' time (up to 06.10.2023) for completion of survey work and submission of report, vide order dated 08.09.2023.

Archaeological Survey of India submitted application no. 385-C before the Hon'ble District Court seeking four weeks extension of time because of heavy rains and due to the slow process of the scientific investigation/ survey. The Hon'ble District Court accepted the application and granted four weeks' time (up to 03.11.2023) for completion of survey work and submission of report, vide order dated 05.10.2023.

As per the application submitted before the Hon'ble District Court in O.S. No. 18/ 2022 regarding the unauthorized or fake news being circulated in the print media,



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electronic media and social media, etc. Hon'ble court passed the order dated 09.08.2023 and directed ASI Officials not to share any information regarding the survey work. Hon'ble court also directed the media not to publish unverified news.

In O.S. No. 18/2022, application no. 348-C was filed by the petitioner no. 1 regarding preservation of objects recovered during survey work. The Hon'ble District Court vide its order dated 13.09.2023 directed ASI that important historical and archaeological objects should be handed over to the District Administration for their safe custody. In terms of this order, the District Magistrate, Varanasi passed order no. 3063/J.A.-2023 dated 14.09.2023 and nominated Additional District Magistrate (Law/ Order), Varanasi for receiving the objects.

According to the directions of the Hon'ble Court and extension of time granted, the work was completed on 02.11.2023. All the recovered objects were handed over to the district administration on 06.11.2023 for their safe custody.

According to the directions of the Hon'ble Court and extension of time granted for submission of report by orders dated 02.11.2023, 18.11.2023, 30.11.2023 and 11.12.2023 the report is to be submitted by 18.12.2023.



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Constraints



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Constraints

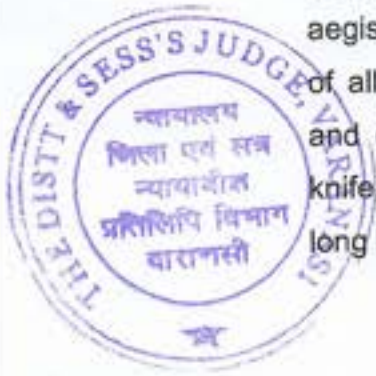
Scientific investigation/ survey was conducted within the fenced area of the Settlement Plot No. 9130, Varanasi in compliance of order of Hon'ble District Court, Varanasi. Though the work started on 24 July, 2023 it was stayed by the orders of Hon'ble Supreme Court of India. On 03.08.2023 the Hon'ble High Court, by its order allowed for scientific investigation/ survey of the area except for excavation. It also directed that no harm to be caused to the structures present within the area under investigation.

Work within the fenced area was restarted from 4 August 2023 onwards in the presence of both the parties involved in the case, their representatives and lawyers. Additional security cover was given to the team on site through the District administration. Support and cooperation was received from all concerned for the smooth progress of work.

The sensitive nature of the case led to widespread media coverage of the survey team as well as its day-to-day activities. Though the media did not have access to the area under investigations or even its neighbouring area, the team worked under constant media glare. However, the judiciary intervened in the matter and forbade any press reporting on the daily activities of the team.

Hon'ble High Court's directive for only surface study without use of excavation slowed down the work, as the study area was obscured by accumulation of large quantities of debris on all sides. The accumulated debris was a big hindrance in any scientific investigation/ survey and getting meaningful results from them.

The removal of debris from the surface was a desideratum and efforts were made to arrive at a consensus regarding the same with the concerned parties under the aegis of the District administration. It was demonstrated on site, in the presence of all concerned, how the team proposes to remove the accumulated garbage and debris through the use of household and garden equipments like trowel, knife, scrapper, rake, handle brushes, paint brushes, plastic and metal dust pans, long handle brooms, etc.



The disposal of debris removed from the surface was another inherent issue. Since the open spaces within the fenced area is very less and the fact that every part needed to be cleaned created the issue of disposal of debris. District administration was approached to earmark spaces adjoining the fence to the west and east so that debris can be removed from the fenced area.

Two areas were identified to the west and east. In the west, the already existing area beyond the channel gate was selected. The area beyond the gate was barricaded and covered for the same. The channel gate was opened and closed by the security officials to facilitate the work.

In the east, it was more of a channel as there was no gate. A funnel shaped receptacle with long channel was fabricated to remove debris. The receptacle was placed within the fence on vertical stands while the channel passed through the grill at an acute angle to enable sliding off of debris.

The presence of security check posts at regular intervals, some in use and others vacant, also hampered smooth and swift movement around the area. The narrow passages on along the north, south and east also hindered ease of movement. Labours had to be stationed at select points to transfer head load.

The team worked in difficult weather conditions from blazing sun with soaring temperatures to high humidity of the monsoon season. The cellars below the open platform had their own localised ambient weather conditions. The south cellars had only one entrance to the south and similar was the case with the north cellars. There were no light and no electricity connections in either of them.

South cellar in particular was full of discarded materials of various kinds which made even stepping on to the surface a difficult task. For the first few days team worked in the cellars with torch light and reflectors to illuminate the interior. The humidity within the cellars was much higher than on the outside. The lack of air circulation within was another issue. Since the north cellars were under lock and key the level of humidity within was comparatively higher than the south.



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Subsequently, series of bulbs were put up all along the walls and exhaust fans and pedestal fans were used to make the ambient atmosphere within the cellars congenial for long working hours.

With the onset of monsoons, preventing accumulation of rain water and run off muddy slush was a significant issue. The use of *tirpal* was made to protect the exposed structures after debris cleaning and prevent accumulation of water in open areas. The water sogged debris would present another challenge along with the slippery surface. Work speed was affected considerably.

Storage of equipment and tools and other work related paraphernalia as well as safe keeping of retrieved materials were other issues. Two vacant security check posts were modified as per requirements to act as stores for the team within the fenced area.

A camp office was set up in a building suggested by the local administration within the temple complex. Bulk storage of necessary items was kept here. It also served as a sitting area for the team during the long mid-day break.

Menace of monkeys was another ever present threat. Not only did they disturb free movement within the fenced area but after the close of work they would disturb the area. During monsoons they would often tear up the *tirpals* after close of day's work.

Despite all the constraints, the team worked dedicatedly to comply the directions of the Hon'ble Court and carried out systematic scientific investigation/ survey and documentation in the Settlement Plot No. 9130.



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Location



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Location

Kashi is one of the oldest continuously inhabited settlements in India. It is situated in the highly fertile Middle Ganga Plain. This ancient city was known by varied names – Kasi, Kashi, Varanasi or Benaras. The ancient settlement is located on the left or northern bank of the River Ganga. It stretches from 82° 50' to 83° 10' E and 25° to 25° 16' N. Its lateral boundaries are formed by confluence of the Varuna and the Assi with the River Ganga. This confluence of Varuna and Assi with the Ganga is understood to have given rise to the name Varanasi.

On the basis of various sources, i.e. literary, travellers' accounts, epigraphical and archaeological finds its historicity can easily be traced back to the second millennium BCE.

Literary Sources

There are several sources that mention the names 'Kasi' and 'Varanasi'. Kasi is the oldest name of the city and its first mentioned is in the *Atharvaveda*. Many other ancient literary sources have also discussed about the historicity and importance of Kasi such as – *Satpatha Brahamana*, *Gopatha Brahamana*, *Brihdaranyaka Upanishad*, Panini's *Ashtadhyayi*, etc.

Anusashanparva of the *Mahabharata* refers to Divodasa as a king of Kasi with his capital in Varanasi. Buddhist texts such as the *Mahavastu*, *Buddhacarita* as well as several *Jatakas* prominently refer to Kasi or Varanasi.

The *Puranas* variously refer to Kasi, Kasipuri, Kasikapuri and Kasinagari to denote the ancient settlement. The *Skanda Purana* also refers to the ancient city by the names *Vaisveswaripuri*, *Visvesvaravasa*, *Visvesvara-rajdhani* among others.

Yet another name for Varanasi was 'Avimukta'. The name is associated with the legend of Lord Shiva where it is mentioned that Shiva will never leave Kasi.

During 9th century CE, Shankracharya refers to the city as 'Vimuktinagari' – a city of salvation.



During the medieval period, Kasi or Varanasi was popularly known as Banaras. It was a great centre of trade and commerce since ancient times. Patanjali in his *Mahabhasya* mentions about Kasi cloth.

The '*Kashi Khanda*' of the *Skand Purana* refers to the seven preeminent holy places and Kasi is named first on that list.

Travellers' Account

Several foreign travellers visited Kasi throughout history and left behind detailed information about the city and the life of its people. Chinese travellers Fa-Hien (399-413 CE) and Hieun-Tsang (7th century CE) both mention the name Varanasi (Po-lo-ni-sse) and Kashi in their accounts. Another Chinese traveller, I-Tsing, also visited this ancient city and mentioned the name as 'P'O-LO-NI-SSE (Kasi or Varanasi).

Several European travellers visited Benaras during the medieval period. Peter Mundy, who visited the Varanasi in 1632 refers to Cassibessuua or Cassibesuva, which is used for the Vishveswar temple. He also made a sketch of the Shiva *linga* which was under worship in the temple and an image of Ganesha.

During the British rule in India, Benaras continued to be known by this name.

Epigraphical Reference

Many inscriptions and other Epigraphical sources also speak about Kasi or Varanasi. The Paharpur Copper-plate grant of the Gupta Year 159 (478 CE) mentions about a vihara belonging to the Panca-stupa section (*Nikaya*) of Kasi.

Another inscription is the Kamauli Plate of Govindchandra, King of Kanauj (V.S.1184/ 1127 CE). It refers to the king moving to Benaras or nearby.

Seals and Sealing

In excavations various seals and sealing have been unearthed which throw light on the past of Kashi or Varanasi. A seal found from the excavation at Rajghat also



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throws light on the religious aspect of the city. It shows a seated bull to left in front of a combined trident and battle-axe symbol (*trisula-parasu*). The legend on it reads *Avimuktesvara-bha(ttarakah)*.

Another sealing datable to the medieval period reads *Sri-Avimuktesvara* in the script of about 8th century CE. A fragmentary sealing in Allahabad Museum has the legend *Avimuktesvara* on it. It shows a seated bull above and below it the symbol of a flowing river indicated by a wavy line between two straight lines. Another sealing also in Allahabad Museum reads *Sri-Avimuktesvarasya* and depicts a bull seated between two *trisula-parasu* symbols and a sun symbol above.

Archaeological Evidence

Varanasi is believed as one of the oldest cities in the world. Excavations at a number of sites spread over different parts of the city and its adjoining areas like Akhta, Asapur, Kotwa, Rajghat, Ramnagar, Sarnath, and Tilmanpur have demonstrated that human settlement can be traced back from later Vedic period up to present.

From the history of archaeological expeditions carried out in Varanasi, the city has witnessed its earliest settlers at Akhta around 1400/1300 BCE. Ancient remains of Varanasi which were unearthed at Kashi-Rajghat could demonstrate that this site was inhabited around 9th century BCE. Sarnath, the place of first sermon of Gautam Buddha, which was located on the northern periphery of the city, is known to have retained archaeological remains from the time of the Maurya king Asoka.

The cultural occupations at Rajghat based on the material findings can be roughly categorised as **Period-I**-Later Vedic, **Period-II**-Janapada Period, **Period-III**-Maurya-Sunga, **Period-IV**-Kusana, **Period-V**-Gupta/Late Gupta, **Period-VI**-Post-Gupta, **Period-VII**-Early Medieval, **Period-VIII**-Medieval period followed by the British period.



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Settlement Plot No. 9130



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Settlement Plot No. 9130

As per old revenue records, the 'Khasra' of Mauza Shahr Khas, Pargana Dehat Amanat, District Benares Settlement Plot No. 9130 included - 'Pacca' Juma mosque with a 'pucca' courtyard at the back thereof; one 'pucca' platform and one graveyard compound towards the north; 'pucca' steps in front of the door together with a 'pucca' enclosure on all the four sides; one 'pipal' tree and two cypress trees; one 'pucca' well having saltish water, possessed by the Muslims being under the management of Moulvi Qutbuddin Vakil; one 'pipal' tree towards the southern platform (both the enclosures appertaining to the mosque).



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Study Area



Study Area

Major part of the Settlement Plot No. 9130 has been fenced by two rows of strong steel grills. The smaller grill, about 10 feet in height was put up around thirty years back and the safety of the structure was further enhanced subsequently by providing another grill of similar nature but almost double in height on the outside.

As directed by the court to conduct detailed scientific investigation/ survey to find out as to whether existing structure has been constructed over a pre-existing structure of Hindu temple, similar terms are used for them. Remains of Hindu temple, predating construction of mosque are called "pre-existing structure" and the structure constructed over that is termed "existing structure".

Area where scientific investigation/ survey was carried out by the Archaeological Survey of India in settlement plot no. 9130 is described here in brief, in order to indicate relative locations of different parts/ areas and the terms used for their identification. For easy understanding and clarity of the readers, these areas are also marked on the site plan (volume 4, p. 207).

Entry of persons in the fenced area is regulated through a narrow and barricaded lane starting near gate no. 4. The entire area is secured and heavily guarded by security personnel. The fenced area is entered through a small gate from north side **Entrance**. The surrounding area outside is higher than the inner area and therefore one has to get down using two steps at the entrance.

On entry, one lands on to a little open area between the walls of platform to the south and steel fencing to the north. This narrow strip, running east to west is termed as **North Side**.

Northern wall of the platform, from east to west, has an opening of **North Cellar**, a flight of steps to the platform, two shops (No. 1 and 2), a low platform having three graves (3, 4, 5) and a shop (No. 3).



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The entrance to **Cellar N2** has a steel door, which remains locked. On entering in this cellar one can notice another cellar, **Cellar N1**, to its east. All four entrances of cellar N1 in its west wall are sealed through masonry work. The back wall (south) of the cellar N2 forms the northern wall of *vazukhana* which is sealed by the order of the Hon'ble Supreme Court and was not examined as per the order of the Hon'ble District Court. Being the wall of a tank, it always remains damp and water overflows this wall making the soil wet and increasing humidity inside the cellar. Towards west are four openings leading to **Cellar N3** of almost same length as of N2.

A flight of steps, just in front of the entrance, leads to the **Platform** which is at a height of almost 3 meter from the surrounding ground level. A flight of steps is also provided from the opposite side and both meet at the top. The platform is entered through an entrance gate facing north at the top. This stair case is placed between entrance to N2 and shop 1.

Shop 1 is a later structure constructed along the northern wall of the platform and has an opening towards north. The back wall of this shop has an opening through which one can enter **Cellar N4** which is constructed towards the western end of the platform.

Next to this shop there is another similar structure, **Shop 2**. The back wall of this shop has an opening through which one can enter **Cellar N5**, which is constructed under the *sahan* (eastern corridor).

Open area towards west, next to shop 2, is a platform containing three graves. Two of them, **Grave 5 and 4** are constructed close to each other after which there is some open space and there after stands **Grave 3**. The back wall (northern) has an unusual projection close to grave 5. Area between this platform and steel fence on the north would have been at a lower level but is now filled with garbage, soil, debris, etc.

Next to this platform stands another structure, **Shop 3** which is a later and comparatively crude construction with an opening towards north. It does not have



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any door and is filled with garbage, soil, debris, etc. After the entrance to this shop ground level rises considerably and one has to climb through crude steps to reach area to the west of it.

The entire area to the west of existing structure and between the **Western Wall** and the steel fence is termed as **West Side**. For the convenience of study this area has been further divided into three parts.

Middle area between two projecting walls towards west is termed as **Western Chamber**. The eastern wall of this chamber has a beautifully decorated arched entrance. In the centre of it there was a small gateway leading to the main chamber which is now used as central hall of the existing structure. On the inner side of this entrance arch is the *quibla* of the existing structure. Originally, this chamber had its main entrance from the west. It also has two arched openings towards north and south.

Area towards north of the western chamber which is surrounded by fence to its west and north, western wall to its east, and northern wall of the western chamber to its south is termed as **Northwest Side**. This area was fully covered with heap of garbage, soil, debris, etc. and after careful cleaning remaining lower portions of the pre-existing structures, the extension from northern entrance of western chamber and western entrance of north chamber were exposed.

Area towards south of the western chamber which is surrounded by fence to its west and south, western wall to its east, and southern wall of the western chamber to its north is termed as **Southwest Side**. This area was covered with vegetation growing over a platform which is crudely made by using stones and lime mortar.

A thin narrow strip running east to west between southern wall of the platform and steel fence in south is termed as **South Side**.



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In the eastern half of southern wall there is an opening which leads to **Cellar S2** constructed under the platform. On entering the cellar one can notice other cellars running parallel to it towards the east and west.

Towards east of S2, runs another cellar of same length. All the five entrances in the western wall of **Cellar S1**, have been blocked and filled using bricks and stones.

Towards west of S2, runs another cellar of almost same length. All the four entrances of **Cellar S3**, in its eastern wall were blocked by filling soil or keeping stones and architectural members. Two of these entrances were opened to enter cells of S3 for examining the cellar. On entering into these cells it was noticed that they were deliberately filled with soil and debris by making a hole in their ceilings. The debris was filled in from these holes and entrances were blocked temporarily by putting stone slabs, architectural members, etc.

A narrow strip running north to south between the eastern wall of platform and steel fence in east is termed as **East Side**. An area in the middle of the eastern wall is projected eastwards. Originally it would have been the entrance to the platform which would have been approached from two sides.

On climbing the steps from the north side one reaches to the top of cellars, which forms an open **Platform** in front of existing mosque. This entire area is paved with stone slabs and has a dwarf parapet on all the three sides. A temporary tin-shed has been made in the north-east corner of the platform for security personnel. Next to it is a **Well** which provides water to the devotees. Some **Toilets** and washrooms have been constructed to the south of it. A square area having a tank filled with water under a tin-shed and *jaali* all around is known as **Sealed Area**, as this area has been sealed by the orders of Hon'ble Supreme Court. This sealed area was excluded from the present study.

To the west of this open area stands a structure with three domes known as Shahi masjid. It is approached through an arched entrance in the centre. Area to the north and south of it has a pillared verandah which is termed as **East**



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Corridor. It turns to west on either ends. Corridor towards north is termed as **North Corridor** and the other at the south as **South Corridor**.

The area within these corridors has three big halls with domical ceiling. One big hall in the centre is termed as **Central Hall** and two smaller ones on either side respectively termed as **North Hall** and **South Hall**.

Central hall retains all its original features except some minor changes whereas inner parts of north hall and south hall have been made by reused material from earlier structures. As a result the masonry is not that fine and surface is somewhat uneven. Interior of both of these halls is covered with layers of putty, thin plaster and thick layers of enamel paint covering most of the finer details of these stones which are reused for their construction.

The interior of central hall is almost intact. It is noticed that elephant figures at the bottom of decorative arches have been chopped off. Pilasters on either side of western entrance, which has now been converted into the **quibla** have also been chopped off unevenly.

Western entrance of northern chamber of the pre-existing structure has been blocked and converted in to a narrow staircase to climb to the roof. It is entered through a small gate on the northwest side.

Western entrance of southern chamber of the pre-existing structure has also been blocked and converted into a narrow staircase to climb to the roof. Its entrance from southwest side has been blocked by stone masonry but one can still enter them from the roof.

All three halls have double domes. Among these, **Central Dome** is bigger and higher. The inner dome of the central hall appears original, except the geometric designs made on the ceiling inside. All three upper domes have a small opening through which one can enter them and walk around over the inner dome.



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The façade of the mosque has two **Minarets** flanking the superstructure of the entrance. The upper part of the minarets have very narrow and circular flight of steps within through which one can climb to their top ending in a pillared **Chhatri** open from all sides and having a small dome on top. A series of small openings provided in different directions provide light and air inside. Five pillared *chhatris* resting on pillars and having a small dome are provided between these two minarets.

On the all four corners of the existing structure, four square *chhatris* raised on four pillars and a dome on the top are provided.

Details of these structures are given in relevant chapters.



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Cellars



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Cellars

Settlement plot no. 9130 where exists the disputed structure is of uneven surface having slope towards east. Pre-existing structure was constructed on the western side of the plot. When it was modified and extended towards east by making a large platform, a series of cellars were made below it. These structures made below the surface level of main structure are termed as Level 1.

Cellars made at Level 1 are located at different places below the main structure (Level 2). According to their entrances, from the north and the south, they have been placed in two broad groups. Two units to the north and one unit in the south were opened and used by people for various purposes. Entrance to the first unit in the north is closer to the north-eastern corner.

This is a cluster of three halls interconnected with each other. They have been numbered, from east to west, as N1, N2 and N3. The next unit of cellars (two in numbers) is below the existing structure to the northwest (numbered as N4 and N5), behind the present security station to the right of the entrance to the fenced area. The three cellars to the south (S1, S2 and S3) are directly opposite to those to the north.

North Cellars

Access to all these cellars is through a common entrance in the north wall. This entrance opens into cellar N2. To the east of N2 is N1 and to its west is N3. Access to N1 and N3 cellars is through four entrances each along the east and west walls of N2 respectively. All the cellars lie in north south axis. The four entrances of the eastern side wall are blocked with modern brick work. The blockage is set back a little from the outer line of the wall. This creates a false niche-like appearance. All the four entrances providing access to N3 along the western wall are open.



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Cellar N1

Since the four entrances on the eastern wall of N2 which gave access to N1 are all blocked nothing is known of its dimensions or inner arrangement. The entrances measure approximately 1.75 m in length and 1.11 m in width.

The wall itself is largely constructed of lakhauri bricks set in lime mortar. Though the wall has been heavily painted over with lime it is possible to make out the bricks and the sparing use of stone blocks and even modern bricks.

Cellar N2

Cellar N2 is rectangular in plan, with its long axis in north-south alignment. It is divided into a central nave and two side aisles by two rows of pillars. A mix of different types of pillars used in the two rows suggest secondary use as well as varying construction times. Originally, the cellar had only four pillars in each row. However, sometime at a later date more pillars were inserted within the rows as props to support the ceiling above. The pillars of the two rows are as follows:

East Row (north to south)

1. Stone pillar with bracket capital
2. Stone pillar with bracket capital
3. Inscribed pillar with bell motif, arched niches and bracket capital
4. Modern brick masonry pillar
5. Decorated stone pillar with stencil pattern designs and bracket capitals
6. Masonry pillar: stone base and stone shaft sandwiched between modern bricks

West Row (north to south)

1. Modern brick masonry base with stone shaft
2. Stone pillar with bracket capital
3. Stone pillar with bracket capital
4. Modern brick masonry pillar
5. Stone pillar with bell motif, arched niches and bracket capital
6. Rectangular stone base and stone shaft
7. Stone pillar with bracket capital
8. Stone base with brick masonry shaft



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The pillars originally used in the construction of the cellar comprise of a cubicle base which supports the long shaft above. On top of the shaft is a cubicle abacus. The abacus supports the bracket capitals placed back to back in north south alignment. The capitals uphold the ceiling beams from below which span the entire length of the hall. Additionally, two brackets are seen protruding from the wall matrix of the southern back wall into the cellar in line with the two rows of pillars. This suggests that the corresponding abacus and pillars would have walled in.

There are two pillars, one on either side of the entrance, along the northern wall. They are in line with the two rows of pillars within the cellar. The different components of the entrance have been constructed out of stone – doorsill, lintel, cornice and pillars embedded in the wall matrix. Since the wall is covered with cement plaster and lime wash it is difficult to discern the true nature of construction. The pillar to the east of the entrance is embedded in the wall matrix. The cubicle bracket projecting out of the wall shows two leaf motifs with stenciled floral motif in their centre. A single bracket capital rests on top of the abacus and projects into the cellar. This bracket is held in place by stone blocks on its either side – all three resting on the abacus. Together they carry the load of the ceiling beam.

The north wall to the west of the entrance has a pillar shaft and a cubicle abacus. However, nothing of the arrangement is known as the same as well as the wall has been covered with modern brick masonry and painted over with lime.

The ceiling of the cellar is divided into three parts corresponding to the central nave and the two side aisles. They are constructed of stone slabs placed side by side, in east-west axis. The ends of the ceiling slabs of the nave rest on the beams above the pillars. Since the beams are of uneven surface, the gaps between the beams and the slabs are filled in with lakhauri bricks and stone pieces as per requirement. The ceiling slabs of the aisles have one end supported by the pillar beams while the other end rests on the top of the side



walls. The juncture of the side walls with the slabs is faced with horizontal blocks of bracket design.

The eastern wall of the cellar abuts onto the north wall from inside. To the south, it appears to continue along, with the south wall abutting against it. The south wall also abuts on to the western wall of the cellar.

Cleaning and Study

Heaps of soil and debris were noticed inside the cellar. In order to observe architectural details and features of the floor level, pillar bases and doorsill, debris were cleaned at selected place within the cellar. On removal of dumped soil on the floor level, door sills of the 3rd entrance of both the eastern and western walls could be seen. The door sill of the entrance in western wall showed the continuous leaf motif pattern similar to that as observed in the stone skirting of the main western wall of the pre-existing structure.

The base and foundation of the pillar with bell motif in the eastern row could also be seen after clearance of debris. The base of the pillar has deep groove on all four sides. The foundation of the pillar is made up of stone slabs placed all around it.

Cellar N3

Access to N3 is through four entrances provided in its eastern wall and opening in N2. This wall is constructed of stone blocks and architectural members set in lime mortar. The lintel of these four entrances is made up of stone slabs placed side by side. A stone slab inserted into the lintel of the 2nd entrance is inscribed. The four entrances give access to a long and narrow hall having north-south axis.

The east and west walls of the cellar are made up of stone blocks set in lime mortar and painted over with thick lime coat. The use of lakhauri bricks is restricted to the spanning arches, walls rising from them and the ceiling.

The hall of N3 has three arches constructed from lakhauri bricks and set in lime mortar. These arches spring from the inner face of entrance wall and span the



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entire width (approximately 2.84 m) to the far interior western wall. These arches spring from the wall surface between entrances 1-2, 2-3 and 3-4. The width of the brick arches is in the range of 61-64 cm.

The ceiling of the hall rises in a curvature from the arches and the side walls. At the very top, the curve of the walls ends to form a horizontal flat space which is then closed off with lakhauri bricks and lime concrete. The ceiling is plastered over with lime concrete.

The far western wall of the cellar has three deep niches. These niches face the 2, 3 and 4 entrances. Another niche, of comparatively bigger dimension, is seen of the inner face of the northern wall of the cellar.

This cellar was previously used for storing coal and some coal is still lying in one of the corner of the cellar. Cleaning of the debris near the eastern wall revealed the nature of construction. On cleaning the area, use of stone blocks set in lime mortar was seen.

Artefacts

In cellar N2, loose dumped earth was found accumulated against the eastern wall. It covered the area near 1st to 3rd entrances in the eastern wall. On removal of this dumped earth revealed pilasters of varying sizes placed on the debris filled floor. On stylistic ground, these pilasters can be dated to the late medieval period when temple construction activities got impetus from the Maratha patronage. In addition, small architectural members were also found.

Inscriptions

A number of inscriptions were also found in these northern units. The pillar with bell motif in the eastern row has a dated inscription on the surface with arched niches. Some other inscriptions were found on the ceiling slabs of the eastern aisle. In the lintel of the 2nd entrance of the western wall an inscription was found wedged inside. Yet another inscription was found engraved on the underside of a stone slab used in the cornice above the entrance in the north wall.



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Some decorated architectural pieces were found embedded in the wall matrix at different places. A fragmentary frieze depicting the *chaitya* arch motif was found in the wall matrix of the south wall in N3.

A decorated brick of historical period having diamond pattern was found embedded in the inner face of the eastern wall.

Cellars N4 and N5

There are two single units of cellars behind the present security station to the west of the entrance to the fenced area. Both the cellars are fronted by modern rooms that functioned as shops till at least 30 years back. The modern constructions abut against the northern wall of the existing structure at Level 2. The cellars themselves are under the structure.

The construction of N4 and N5 cellars is similar to that of N3 described above. The four walls are made up of stone blocks set in lime concrete mortar. However, the ceiling above is constructed of lakhauri bricks and lime mortar. The entire is then coated over with lime. The ceiling of the two cellars rise up in a curved form and the central space is then a flat surface.

The floor of N4 in the southeast corner had sunk in. This hole in the floor provided an opportunity to note some of the features of the foundation along the back wall. The foundation is made of cubicle blocks of stones placed adjacent to each other and one row above another. The intervening spaces are filled with smaller stone pieces of random shape and size. The entire is held together by the use of mortar.

South Cellars

The entrance to the three units of the cellars is through a common pillared entrance along the south wall. This entrance gives access to S2. S1 is to the east of S2 while S3 is to its west. Access to S1 and S3 are through 5 entrances in the wall towards east and four entrances in the wall towards west respectively. However, all these entrances were blocked, some by brickwork and some by



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placing some loose stones, etc. These entrances, for most part, are opposite each other, between the pillars, with minor variations in their placement.

Cellar S1

There are 5 entrances along the wall towards east in S2 which were meant to provide access to S1. However, these entrances have been blocked over with lakhauri bricks and/ or stone blocks set in lime mortar. Proceeding from south to north, the entrances 1, 2, 4 and 5 are blocked flush with the edge of the openings while in the third entrance, it is set back thus creating a niche like space within the wall matrix.

The entrance in the northeast corner has a completely different design than the remaining four. It is also larger in dimension than the rest. This entrance is framed by stone pillars and bracket capitals. Above this is an arch of lakhauri bricks. The entrance has been blocked by stone blocks set in lime mortar.

The remaining four entrances show use of stone blocks placed as lintel. Above the stone blocks is seen the presence of an arch spanning the entire width of the opening constructed from small size bricks placed length wise. The space between the arch and the stone slabs of the entrance is also filled up with small size bricks. These entrances have been blocked with lakhauri bricks set in lime mortar.

Cellar S2

This cellar is rectangular in plan. It is a pillared hall divided into a central nave and two side aisles by two rows of north-south oriented pillars of various designs and shapes.

The cellar has 12 stone pillars and two brick masonry pillars of relatively modern period. Eight stone pillars are placed in two rows in north-south orientation. Other 4 stone pillars form part of the southern wall; two framing the entrance and two pillars, of slender dimensions, in either corner of the wall. The pillars framing the entrance to the cellar are in alignment with the east and west rows of pillars inside.



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Two masonry pillars have been constructed in line with the rows of stone pillars, one on each side, before the first pillar. They have been strategically placed as props to support the stone beam on top which in some point of time in the past had developed a crack and started to separate.

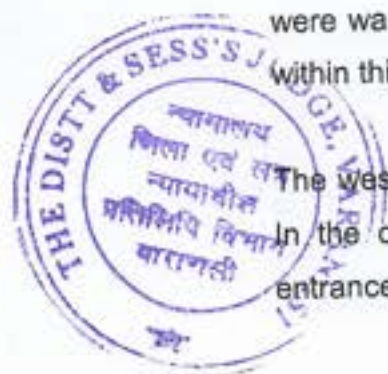
Each stone pillar has four component parts. Starting from the base, is a large cubicle block roughly square in plan. Over this is the shaft of the pillar, this is also rectangular or square in plan. On top of the shaft is another cubicle block, this forms the abacus over which rests the bracket capital.

Each pillar has two bracket capitals placed back to back in north-south orientation. The bracket capitals support the longitudinal beams over which rest the ceiling. The bracket capitals, in some cases, are fashioned out of a single stone block while in others two individual brackets have been placed back to back. In either case, it is noted that there is rectangular groove in the centre which was originally meant to receive other pieces of bracket capitals, either on one face or both as per requirement.

The pillars framing the entrance to the cellar have a similar composition of constituent parts. Only difference is in the placement of the bracket capitals. The bracket capitals of the entrance form a 'T' shape above the pillars. The longer east-west axis has back to back brackets with a single bracket capital projecting within the cellar in line with row of the pillars in north-south axis. The brackets framing the entrance and those projecting within the cellar are in clear view.

The entire southern face of the cellar was originally just a pillared entrance divided into a nave and two aisles. However, at a later date the aisle openings were walled up. The brackets over the entrance pillars are completely walled up within this matrix.

The western half of the entrance retains certain features of the pillared opening. In the corner is a slender pillar. A single bracket capital on top framed the entrance along with the bracket capital of the central entrance. Subsequently, the



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section was walled-in by using stone blocks from the bottom. Use of modern bricks set in cement mortar is seen towards the upper half within the brackets. The wall section above the brackets is made up of lakhauri bricks set in lime mortar.

The eastern part of the entrance, along the aisle, also shows a slender pillar in the corner. The bracket on top, if any, is not currently visible. The wall from below is constructed of stone blocks held together by lime mortar. The upper part of the wall is made up of lakhauri bricks.

The inner side of northern wall is constructed of lakhauri bricks set in lime mortar. The western wall of the cellar, is for most part, constructed out of irregular stone blocks, of varying dimensions, held together by lime mortar. Lakhauri bricks have been sparingly used. Use of modern bricks in repairs is also noted at places.

The northern wall of the cellar runs through the entire visible length in east-west axis. While the eastern wall abuts against it; in the north-western corner it abuts into the western wall. The northern wall projects into the cellar in the western aisle. A niche has been cut into the north wall, facing the eastern aisle.

The two aisles and the central nave along the northern wall have a platform made out of earth filling and faced with stone blocks and slabs upto the line of pillars. This was a later addition to the cellar. This debris filled platform starts from the south wall along the east. However, in the west it starts from the first stone pillar near the entrance.

The ceiling of S2 is again divided into three parts corresponding to the arrangement of the central nave and two side aisles. The construction of the ceilings of each of the components though is similar, stone slabs placed side by side. In the central nave, the slabs are held in place on either ends by stone beams running north to south above the bracket capital of the pillars. In the aisles, one end of the slabs is supported from below by the beams while the other end goes into the top of the walls. The top of the walls have horizontal stone members fashioned like brackets with the curved surface facing the interior of the



cellar. The ceiling of the cellar is constructed of two levels of stone slabs and sandwiched between the two is a thick deposit of lime concrete mortar. This arrangement also forms the floor of the open platform on top, fronting the existing mosque structure.

Debris removal was undertaken at selected places in the cellar to reach the floor level. Near the 3rd entrance debris removal revealed the stone sill of the entrance. This stone door sill had a running leaf motif *pandasa*. The same arrangement is also found running below the stone skirting of the main exterior western wall. This slab appears to run along the entire length of the western wall of the cellar. Below the door sill and extending in front is an approximately 65 cm wide rammed floor. This too appears to run parallel to the line of the western wall.

The foundation of the pillars 2 and 3 of the western row was also cleared of the overlying debris. A line of stone blocks was used as a foundation along the nave side extending between the two pillars. One of the blocks used has a decorative face that was covered over with rammed lime concrete. Towards the aisle side this stone foundation line is broken and instead rammed lime concrete was used to fill in the gaps.

Since debris could not be removed from the platform along the eastern wall, it was not possible to identify a floor level or foundation. Debris cleaning near the 3rd pillar of the eastern row revealed that the cubicle base of the pillar was resting on a wall like structure. The exposed part of the foundation showed that lakhauri bricks have been used in the construction. It is in north-south axis in line with the row of pillars above.

Cellar S3

As mentioned earlier, the four entrances along the western wall of S2 have been blocked with debris of earth and loose stone members. However, after clearing the packed stone members on top of the 3rd entrance was possible to see inside.

The earth filling beyond the entrance did not reach upto the height of the ceiling of the inner chamber. This inner chamber is similar to N3. It has brick arches spanning the space between the two north-south parallel walls and ceilings rising



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in curved form from the walls. Notable features of this inner cellar were presence of two breaches on its ceiling. The smaller one is visible from the entrance 3. It shows a roughly circular hole cut into the brick mortar matrix of the ceiling. The hole is sealed by two stone slabs from above. The second breach, a larger one and roughly squarish in shape can be seen from the 4th entrance and is near the spanning arch. Here again the ceiling matrix has been cut away and the hole is sealed by four stone slabs of the platform.

The earth filling inside the cellar was removed very carefully and partially through the third entrance. Some medium sized pots were found on top of the debris in varying stages of breakage. The filled in debris comprised of relatively loose earth and infrequent presence of potsherds and brickbats. However, nearer to the level of the door sill the percentage of brickbats in the matrix increased manifold. A piece of stone slab was also found.

The four blocked entrances in this wall have rectangular stone blocks, placed side by side, as their lintel. In the second and third entrances, use of decorated architectural pieces is noted in the ceiling. In the second entrance, a slab depicts deeply scooped out double lined diamonds interspersed with full and half rosettes. In the lintel of the third entrance, the decorated slab depicts a row of grooved battlement motif.

Artefacts

The cellar S2 was used as a dumping place of large number of diverse things ranging from bamboos, to terracotta and metal pots, doors and windows, architectural members, etc. A number of architectural members were found stacked over the blocked entrances of the western wall. Among the retrieved architectural members are stone slabs like the ones used in the ceiling, stone *amalakas*, finials, pillars of dwarf parapet wall, etc. Broken sculptural fragments were also found in good numbers. Debris removal along the western wall revealed several things purposely buried therein. Significant among them were full pots of terracotta and defaced sculptural fragments. Additionally, the debris included broken pots in large numbers, such as *chillum*, *hookah* base, miniature pots, lamps, etc.



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A partial inscription was found embossed on a stone member used as a ceiling beam. Engraved figure on a bracket, and mason marks were noted on ceiling slabs, bracket capitals and pillars.

Observations

- Cellars N3, N4, N5 and S3 all belong to the same time and constructed simultaneously as revealed by their identical architectural features.
- Similarly, N1 and S1 appear to be contemporary as suggested by the almost exclusive use of lakhauri bricks in their construction.
- Thus, there were two parallel rows of cellars to the west and east.
- The two rows of cellar were opening into the open central space in between.
- Subsequently, the central halls, N2 and S2, were constructed within the open space to bring the two rows of cellars in a single unit.
- Building materials from earlier structures were generously used to erect these cellars (N2 and S2).
- Since these cellars were an afterthought, their construction show patch work of different elements. As a result, they developed issues of structural stability that required further intervention, especially to prop up the ceiling.



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Existing Structure



Existing Structure

Existing structure, at Level 2, is a mosque. It has been constructed over a raised platform facing east with the 'Quibla' to the west. The raised platform divides itself into two distinct functional zones – the open platform on the eastern half and the mosque to the west.

The mosque, constructed on the pre-existing western wall, comprises of three distinct prayer halls interconnected with each other, a pillared corridor in front (east) and two corridors along the north and south sides. On the terrace are three double domes corresponding to the three halls below. On the four corners are four small pillared *chhatris*. The main central entrance to the mosque is an imposing structure with minarets on either side that rise high above the terrace culminating in pillared *chhatris*. The intervening space between the two minarets is bridged by a pillared corridor. The entire façade effectively curtails the view of the central dome.

In front of the mosque and extending eastwards is a large open space evidently to accommodate large gatherings for prayer. The open platform is framed on the three open sides by dwarf parapet wall. This wall comprises of slender pillars with finial and plain slabs that were mortised into the pillars. The access to the platform is through an opening on its northern side. Two stairs, from east and west, lead onto the common landing in front of the seven domed entrance. This entrance is a relatively recent addition to the structure.

The open platform has a provision for the 'vazukhana' along the eastern parapet wall and extending inwards. This roughly rectangular area is covered with a tin-shed and iron *jali* all around, and the same is sealed by the order of Hon'ble Supreme Court. As per the order of the Hon'ble District Court this area was excluded from the present scientific investigation/ survey.

The entire structure measures 18.90 m east to west, and 38.80 m from north to south. It has an average height of 3 m from surrounding working level, which



varies at certain locations on account of variation in the surrounding topography. Further the front of platform is also different on each side.

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Existing Mosque

Existing mosque is internally divided into three halls. The central hall is flanked by two halls on either side, all in the same north-south axis. The central hall incorporates the niched '*mihrab*' along the centre of its western wall, indicative of the '*Quibla*'. Being it such a big structure, qibla is devoid of any decoration and surrounded by damaged pilasters. In the centre of the other three walls are arched entrances. The arched entrances with a small passage to the north and south, give access to the lateral halls. The main entrance to the hall is through its eastern wall. The central hall is cruciform in plan with its comparatively longer axis being in east-west orientation.

The interior of the central hall is beautifully carved and embellished with decorative geometrical and floral motifs. The lower register of the corner walls, flanking the entrances, and the short passages along the entrance has a series of basal mouldings surmounted by a decorative band. This combination runs all through the interior wall surface except along the western wall. The decorative band comprises of a repetition of bulbous dome-like motif. The corner wall portions above the band have provisions for two niches, one above the other. The two niches are separated by another decorative band – double band of trefoil motif. The niches are arched shaped within a rectangular frame. The base has decorated bands of trefoil motifs. The upper corners within the frame are embellished with stenciled floral motif. The side walls of the four passages below the arches have single niches along the lower part. Thus, there are 16 niches in the lower half and 8 on the upper half.

The wall portion above the upper niches ends with two horizontal decorative bands. The lower band comprises of lotus medallion placed within cusped niches. Above is the trefoil motif band, with the pointed ends facing down. Thereafter, rises the vaulted ceiling from the corner walls within an arched frame. The decorative pattern embellishing the surface comprises of a row of true arch motif and thereafter is a repetition of diamond motifs in honeycomb pattern.



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The wall portions framing the arched entrances, alongside the niches, have vertical offsets. The main vertical register, above the basal mouldings and decorative band, has a series of three shallow rectangular bands, one above the other. There are two sets of this same combo separated by the double band of trefoil motif described above. At the top are two-tiered pendants hanging down. The above arrangement of decorative motifs and architectural features are repeated on all corners of the interior wall surface.

Barring the passages under the arches, the plan of the central hall is rectangular but it transforms into an octagon along the top of the wall portions to account for the four main arches of the entrances and the 4 squinch arches of the corners. Thus, the eight arches stretch upwards in a pronounced inward curve to form the interior domed ceiling resting below the double dome of the roof.

Arches of the Central Hall

There are four true arches, one in the centre of each of the sides of the central hall. They rise up from the vertical offsets in two registers separated by double trefoil motif band. The underside of the arch frame has two rows of decorative pendant motif. Both the series starts on either ends with a kneeling elephant motif, which has been disfigured/ damaged.

The wall surfaces on either side of the passage within the arches have the usual combination of basal mouldings followed by the decorative band of dome-like motifs. Above this is a single rectangular niche. Over the niche runs the double trefoil motif band. The vaulted ceiling then rises up in a pronounced curve.

The corners are decorated with horizontal bands of lotus motif placed in an inverted triangle form. The pointed end of the triangle bears a pendant. The lotus motifs are placed within a cusped arch frame. Above this there are 7 true arch motifs placed in a row. Each is decorated with a diamond and medallion. Further up and culminating in the pointed arch are three tiers of elongated petal motifs.



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Interior Arrangement of the Quibla Wall

The west wall of the central hall incorporates the '*mihrab*' to indicate the direction of Mecca. The *mihrab* is incorporated within a rectangular frame. The recessed arch of the *mihrab* is set back against the rectangular frame. The frame suggests that there were pilasters on either side which projected out of the line of wall. The shafts of the pilasters have been chiseled out irregularly, and unequal projected base survive on either side.

The *mihrab* and the rectangular frame are incorporated within the larger recessed arch of the west wall. The interior embellishments of the wall portion and the semi-vaulted roof are similar to that described above.

North and South Halls

On either side of the central hall, two halls have been made having three arched entrances. The one in the centre of the eastern wall gives access to the pillared verandah to the east. The arched entrances to the extreme north and south give access to the pillared corridors on either side. The entrances opposite to them internally connect with the central hall. Arches in the western wall have been blocked and a false arch has been created against the opposite entrance.

The north and south halls are made square on plan. They do not have many embellishments on the interior and are comparatively austere. The side halls also on their respective west walls have a shallow arched niche for indicative purposes only. The domed ceilings of these halls are also planned in the same manner with the provision of four main arches and four corner arches.

Pulpil (*Mimber*)

The provision of pulpil (*mimber*) is made along the northwest corner of the central hall. It is a large platform to which access is through 4 stairs on the east side. The provision of *mimber* is made for the chief priest (*peshimam*) for guiding the prayer. This was a subsequent addition to the prayer hall as indicated by the nature of material used in its construction.



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East Corridor

The central hall and the north and south halls open onto a common pillared corridor that runs along the entire eastern face of the structure. This east corridor is divided in two segments, north and south, by the façade in the centre which directly connects with the central hall. The eastern wall of the prayer chambers forms the inner wall of the corridor while on its outer face it has pillars supporting cusped arches that opens onto the open platform to the east.

The inner walls of the corridor are plain and made with the help of dressed stone blocks. The pilasters, 8 along the wall and 4 corner pilasters support 10 cusped arches. Out of these 10 arches, 2 central ones provide access to the north and south halls. The extreme corner ones have recessed openings which give access to the north and south corridors.

Above the pilasters are vertical stone members that not only provide height to the ceiling but also support the cusped arches. Except the corner cusped arches, the remaining have 9 cusps each. The corners ones have only seven cusps. There is a provision for header stone beams (*gardana*) on the top of the wall to evenly distribute the load through the arches and pilasters. From these horizontal stone beams the ceiling starts to curve inwards from all four sides. The intervening rectangular space is then bridged horizontally with stone slabs giving rise to the flat ceiling of the verandah.

The eastern side of the verandah is framed by pillars and pilasters. They support the cusped arches that give access from the east all through the length of the verandah. Here again the four corner arches, two on each side have 7 cusps while the remaining 6 are of 9 cusps each.

North and South Corridors

As mentioned earlier, the northern and southern most cusped arches of the inner wall of the east corridor have recessed openings that give access to the corridors on the north and south sides. The corridors have cusped arched openings on their north and south sides framed by 2 pillars and 2 pilasters each. The lower



half of the opening was subsequently walled up. The western part of the corridors was converted into rooms for storage and other miscellaneous purposes.

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Pillars and Pilasters

The pillars and pilasters re-used in east, north and south corridors usually conform to a set style with only slight variation in their ornamental aspects. The bases have a pair of dome-like motifs with stenciled six-petalled flower in the centre. In case of pillars, this decorative motif is repeated on all four sides.

Over this rises the shaft. This is adorned with a central lotus medallion within a square frame and two half medallions on the top and bottom. Again, in pillars this combination is repeated on all the four sides. The corners of the shaft have a vertical chain of flower buds.

Above the shaft is the trapezoidal capital which is comparatively austere with only leaves on the upper corners, 2 in case of pilasters and 4 for the pillars.

All the three components of the pillar and pilasters are fashioned out of three separate blocks of stone.

The only variations noted in the pillars and pilasters are the presence and/ or absence of the various decorative motifs, exclusively on the shaft. In some cases, the half-medallions may be absent. The number of floral buds forming the corner chain also varies. In one case, a chopped off *vyala* depiction can be noted adjacent to the central medallion.

Façade

The façade of the mosque bears distinctive architectural features and reflect the art and artistic influence of the Mughal era. The façade of the mosque comprises of an open arch in the centre. The arch rises above the flanking cusped arch of the verandah imparting grandeur to the main entrance. Beyond the rectangular frame of the arch are two flanking minarets. The minarets rise beyond the level of the roof and continue upwards. The two minarets are joined together by a domed corridor of slender proportions that give access to the interior of the minarets.



These tall, slender towers were traditionally used to call devotee for prayer at designated time. The entire architectural composition effectively curtains the front view the central dome.

The central arch occupies almost the entire depth of the flanking verandahs. On its inner side it has another arched opening that provides access to the central hall. Here again the arch is framed by rectangular wall surface. The interior of the outer arch has two thick side walls within which are recessed entrances to the flanking verandahs. The wall surfaces rise up perpendicularly from three sides (north, south and west). The ceiling curves inward through the smaller arches of the interior. The ceiling is basically repetition of arches and geometric motifs such as diamonds.

The flanking minarets of the main entrance rise up in an octagonal shape. The hollow wall portion concealing the winding steps inside gives way to the pillared octagonal *chhatri*. The minarets have two levels of stone *chajjas* (cornice) supported on stone brackets. The first tier is below the pillared opening of the minarets and the second above it acting as an eave. The *chajjas* follow the octagonal plan of the minarets. The intervening spaces between the pillars of the *chhatri* are spanned by cusped arches. The minarets are crowned by domed cupolas with finial on top.

The intervening space between the two minarets above the level of the central arch is bridged by a pillared corridor. The access to the corridor is through flight of steps along its western face from the roof. It has two flights of steps, from north and south leading to a common landing fronting a cusped arch entrance.

The wall portion of the eastern façade below the corridor shows 6 merlons above a plain moulding. A band of *pandasa* moulding runs above the merlons. Over this wall rises the pillared corridor. Slender pillars and pilasters with cusped arches in between make up the east and west façade of the corridor. The north and south sides of the corridor give access to the respective minarets. Above the opening are stone *chajjas* and the entire is crowned by five domes in north-south alignment.



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The minarets have a core of *lakhauri* bricks which have been provided with stone veneering.

In addition to the central façade, stone *chajjas* run along the eastern face of the verandah above the line of the cusped arches. The *chajjas* are supported from below by stone brackets. Above the *chajjas* rises the dwarf wall of the roof. It has on its eastern face series of merlons. On the four corners of the roof are four minarets, square in plan. The two minarets along the eastern face are accessed by short flight of step from the west.

The corner minarets are comparatively smaller in height than those of the central façade. The dwarf tower gives way to the square *chhatri* on top. The entire is then crowned by a dome. There are two levels of *chajjas* on the corner minarets as well. The *chhatri* rests on four corner pillars and the intervening space is bridged by brackets.

Terrace

The terrace of the mosque has three domes corresponding to the three halls below them. The domes are constructed over a raised platform on the roof. The domes, as per usual prevalent construction style, show the use of double dome.

The access to the raised platform on the roof is through two flights of steps from the north and south respectively. The domes as well as the tall minarets of the central facade are all erected over this raised platform.

The two lateral north and south domes retain evidence of the octagonal base over which the bulbous dome rises. All the three domes show the double dome feature – the shallow inner dome covered by the large outer one. Access to the inner dome is seen on all three domes from the west. The north dome also retains a flight of steps approaching the entrance to the dome. The domes are crowned by an inverted lotus motif at its base over which rises the tiered finial.



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In addition to the above, two flights of steps, to the north and south, leading down were found constructed within the matrix of the western wall. The openings of both the steps are through the roof near the corner minarets constructed on the western wall. The steps to the north give access to the roof from the exterior face of the western wall.

Observations

- The existing structure of the mosque was constructed against the eastern face of the western wall. It was not erected in a single phase.
- As per inscriptional record, the mosque was built in the 20th regnal year of Aurangzeb Alamgir (1676-77 CE).
- In the second structural phase, the corridor and other parts were constructed and/ or repaired in 1792-93 CE.
- For the construction of the *sahan* carried out in the second phase, foundation was provided below in the form of cellars – N4 and N5. GPR survey has indicated similar presence of such cellars along the southern side as well.
- The extension of the open platform eastwards was also carried out in a phased manner over a period of time.
- The cellars N3 and S3, oriented in north-south axis, are contemporary to N4 and N5 as suggested by the similarity in their construction styles.
- This suggests that the open platform extended eastwards till the edge of the cellars N3 and S3. The cellars had their openings to the east as well on the ground level.
- In subsequent phase, the open platform was extended further eastwards by bridging the open space between the cellars N1 and N3 and S1 and S3. This brought into existence the central cellars N2 and S2 whose ceiling was raised on pillars.



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Graves

During the survey work 2 groups of graves were noted within the fenced area. The first group consists of two graves in the western chamber and the second group consists of three graves along the north side between shop 2 and 3.

The graves in the western chamber are in front of the sealed entrance of the central chamber. The two graves lie adjacent to each other in north-south axis. Both the graves have common stone platform with evidence of repair with cement. Both the graves are built of stone. The grave stone in the first grave (near the closed entrance) appears to be monolithic and has developed a crack. The top stone has three small moldings and the flat surface on the top has a rectangular groove.

The second grave lies to the west of the first one. This grave has a raised upper part for which modern bricks and cement have been used to provide height.

Three graves exist on a small platform abutting against the north wall of the existing structure. On the western side this area is bounded by Shop 3 and to the east by Shop 2. Two graves near shop 2 are in close proximity with each other while the third grave is near shop 1 at western end. The platform on which graves are made has a stone edge along its northern face. Two graves at eastern side are constructed using lakhauri bricks in their superstructure, and one of them is partly broken on northern end.



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Pillars and Pilasters



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Pillars and Pilasters

Pillars and Pilasters

The existing structure has total of 12 pillars (numbered 1-12). These pillars are used in north corridor (1-2), east corridor (3-6 – N half, and 7-10 – S half), and south corridor (11-12). These pillars have three major components, starting from the bottom, the pillar base, the main shaft or column and crowned by the capital. The capital, shaft and base are square on plan and have four faces. Each of these components has been carved from separate stone blocks.

There are 18 pilasters (1-18) and 4 corner pilasters in different parts of the structure. Two pilasters (1 and 2) are *in situ* in pre-existing structure, on either sides of the western chamber. The remaining pilasters provide essential support to the walls along the east, north and south corridors. 8 pilasters are placed along the exterior face of the inner wall of east corridor (5-8 north and 11-14 south). These groups of 4 pilasters are framed by corner pilasters, 2 each on the north and south. 4 pilasters are also present along the exterior face of the east corridor framing the row of pillars. The two on the north are numbered 9 and 10 and those on the south are numbered 15 and 16. 2 pilasters are also present on the north (3-4) and south (17-18) corridors.

Pilaster 1 is on the southwest side. It forms part of the extant south cusped arch entrance of the western chamber. The pilaster faces south and is broken in half along its length. The extant part of the pilaster is its eastern half.

The base of the pilaster has a pair of bulbous dome-like motif with six-petalled flower stenciled in the centre. Over the base rests the extant eastern half of the pilaster. In the centre of the shaft is the eastern half of the original full lotus medallion. Immediately adjoining it within a demarcated frame is a depiction of a *vyaḷa* (leogryph). Above and below this depiction is a vertical series of flower buds, 9 on each section.



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The depiction of *vyala* on this pilaster is the most complete surviving specimen of four such depictions noted elsewhere. The depiction of the *vyala* is on the recessed corner of the pilaster. The *vyala* is depicted standing on its lower limbs. The lower part of the figure shows two conjoined limbs. Two tails are depicted on either side of the figure. The upper half depicts the upright torso and the head, facing front. The upper limbs of *vyala* are depicted going across the body, one above the other. The right limb is on top and the left one below it. The most notable is the head of the animal. The most prominent is the overflowing mane on either side of the head. The face is characterized by protruding eyes and upraised ears. The muzzle of the animal is mutilated however, its rounded profile is extant on the right side.

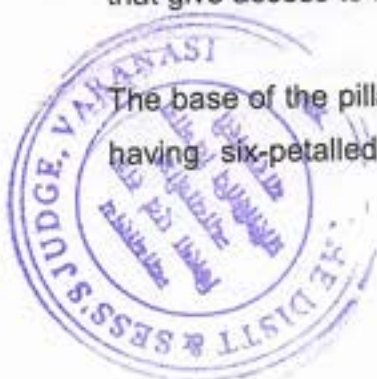
Pilaster 2 is in a similar position on the north cusped arch entrance of western chamber, facing north. The base has a pair of bulbous dome-like motif. The shaft of the pilaster rises above the base and has a single lotus medallion in the middle. The medallion depicts a central bud around which are three concentric rings of petals. On either side of the medallion and within recessed frames are depictions of *vyala*. The *vyala* figures are depicted standing on their hind legs. The faces of the figures are damaged. Vertical series of flower bud motifs occupy the two corners of the pilaster shaft, above and below the depiction of the *vyala* figures. 10 buds each are in the upper series and 9 each in the lower series.

The shaft of the pilaster comprises of two parts. A joint is visible on the top part of the shaft, immediately below the second flower bud motif.

Pillars in East Corridor

The pillars in the corridor are placed along its exterior eastern face. The central main entrance separates the corridors in to two – north half and south half. 4 pillars and 2 pilasters in each part of the corridor provide 5 cusped arch entrances that give access to it from the east.

The base of the pillars is embellished by a pair of bulbous arch/ dome like motifs having six-petalled floral motif stenciled/ grooved in the centre. The same



decorative pattern is repeated on all four sides of the pillar base. Above the embellished base rises the pillar shaft.

The shaft showcases on its four faces a fully blossomed lotus medallion placed within a square border in the centre. Half lotus medallions, again placed within rectangular frames, adorn the top and base of the pillar shaft. The corners of the pillar also have floral motifs. The medallion depicts a central bud around which are three concentric rings of petals. Similar is the case with half medallions. This combination of a full medallion framed by half medallions is repeated on all four faces of the pillar shaft. Running along the four corners of the shaft are a series of flower bud motifs, placed one above the other. The number of such floral buds range in numbers from 20 to 26 on each side.

The capital on top is shaped like a trapezoid with the smaller side facing down. The lower corners of the capital are rounded and then rise up in a curved fashion. On the upper four corners of the capital are leaf motifs. The three components of a pillar are made from three separate stone blocks.

Interestingly, above the pillar capitals a separate stone shaft rises to give height to the cusped entrances and the ceiling on top. The alignment of the top shaft is in line with the pillar shaft. The space between the pillars is spanned by the cusped arches. These arches are devoid of any ornamentation. Of the 5 arches, 3 central arches feature an arrangement of 9 cusps, while the 2 side arches have only 7 cusps.

Pillars in North and South Corridors

2 pillars of similar design and arrangement are used in each of the side corridors to the north and south. Here again the pillars are along the exterior surface and framed on either side by pilasters. The space between the two pillars and side pilasters are bridged by three cusped arches.

Pilasters

Total of 18 numbers of pilasters have been noted at different places of western wall and existing structure. Of them, 16 pilasters have been noted within the



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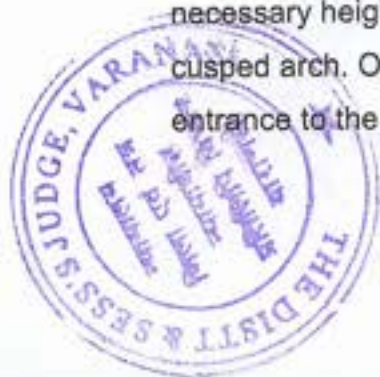
The pilasters provide essential support to the inner wall of the east corridor. Four pilasters are placed along the exterior face of the inner wall of each verandah. The visible face of the pilasters repeats the above described component parts of a pillar – base with pair of bulbous arch/ dome motif with six-petalled floral motif in the centre, shaft having a central full medallion and half medallions on top and bottom and finally the trapezoidal capital.

A difference is noted in the execution of the decorative motifs on the shaft of the pilasters forming part of the northern half of the east corridor. Here only one pilaster, no. 6, depicts the usual combo of one full medallion in the centre and two half medallions on either end. The remaining three show only the central full lotus medallion. The half medallions on top and bottom are absent.

Yet another interesting feature noted in the pilaster no. 7 is the presence of an animal figure along the corner adjacent to the central lotus medallion. This depiction occurs within the floral bud series in alignment with the full lotus medallion. Similar depiction, better preserved, is found on the extant pilasters 1 and 2 on the western chamber.

The corner pilasters, two in each part of the east corridor, depict the decorated base, vertical series of floral buds and capital with one corner leaf. One corner pilaster in the northern half has 24 buds while the other one has 26 buds. In the southern half, both the pilasters have 22 buds each.

As noted in the case of the pillars of the east corridor, on inner wall also, on top of the capital a shaft continues upwards along the wall surface to provide the necessary height to the same. The spaces between each pilaster are spanned by cusped arch. Of the 5 cusped arches in each verandah only the central one gives entrance to the respective hall. The remaining are part of the wall matrix.



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The pillars and pilasters of the east corridor support the ceiling. The wall portions above the pillars and pilasters rise with an inward curvature. The intervening rectangular flat central space is then closed with the use of sandstone slabs forming a flat ceiling.



Table 1. Details of Pillars and Pilasters

Sl No.	Location	Pillar / Pilaster	Measurement	Special feature of the pillar / pilasters
1.	Western Chamber, southern cusped arch entrance, facing south	Pilaster-1	Capital 56 x 80 cm Shaft 248 x 28 x 37 cm Medallion 26 x 14+ cm Vyala 27 x 9 cm Base 48 x 64 cm	In the centre of the shaft, a lotus medallion is extant, and a mutilated image of a <i>vyala</i> is also depicted in the corner. The extant corner of the pilaster is decorated by a vertical chain of 18 flower buds. The recessed <i>vyala</i> breaks this chain in the centre.
2.	Western Chamber, northern cusped arch entrance, facing north	Pilaster-2	Capital 59 x 81 cm Shaft 166 x 61 cm Medallion Centre (Full) 32 x 29 cm Vyala (facing east) 28 x 7 cm Vyala (facing west) 28 x 7 cm	A complete lotus medallion in the centre. <i>Vyala</i> depiction on either side of the medallion. Faces are damaged. There are 10 floral buds on each corner of the pilaster. After the removal of debris, further 9 buds were revealed on either side below the lotus medallion.
3.	North Corridor	Pilaster-3	Not measurable due to construction of room	A small room is constructed in northern corridor of the existing structure. This modern addition in the structure has covered the pillar/ pilaster and due to this obstruction, the measurements are not
4.	North Corridor	Pillar-1		



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				feasible.
5.	North Corridor	Pillar-2	Shaft 282 x 47 cm Medallion Centre (Full) 28 x 28 cm Top (Half) 13 x 28 cm Bottom (Half) 13 x 28 cm	The pillar shaft is adorned with a full medallion in the centre and two half medallions on either end. Total of 24 floral buds are carved on each corner.
6.	North Corridor	Pilaster-4	Shaft 290 x 25+ cm Medallion Top (Half) 11 x 28 cm Centre (Full) 28 x 28 cm Bottom (Half) 11 x 28 cm	Facing west, a lotus medallion is positioned at the centre of the shaft. Half medallion is present at the top of the shaft. On the southern corner, a total of 25 flower buds are visible
7.	East Corridor (North)	Pilaster-5	Capital 58 x 65 cm Shaft 250 x 48 cm Medallion Centre (Full) 29 x 29 cm Base 32 x 50.5 cm	Only full lotus medallion in centre; half medallions are absent on top and bottom of the shaft. Floral buds are 26 in numbers on either side. The fourth bud is broken. Pillar base has pair of bulbous dome-like motifs with six-petalled floral motif cut in the centre. Petals of central lotus medallion are slightly chipped off.
8.	East Corridor	Pilaster-6	Capital 59 x 65 cm	A fully bloomed lotus central medallion, while half-bloomed



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	(North)		Shaft 249 x 46 cm Medallion Top (Half) 10 x 24 cm Centre (Full) 24 x 25 cm Bottom (Half) 10 x 24 cm Base 34 x 52 cm	lotus medallion at both the upper and lower ends of the shaft. There are two dome-like motifs featuring an incised six-petal flower motif on the pillar base. Vertical chain of 24 floral buds adorns the northern corner and 25 buds on the southern corner.
9.	East Corridor (North)	Pilaster-7	Capital 57 x 65 cm Shaft 249 x 48 cm Medallion 26 x 26 cm Mutilated Vyala 34 x 7 cm Base 32 x 51 cm	Facing east, the pilaster shaft has only a lotus medallion in the centre. The half medallions are absent. The common pillar base design of two adjacent dome-like motifs is present. Notably, a mutilated <i>vyala</i> figure was observed on the southern corner within the floral bud chain. A series of 21 buds adorn the southern corner, while 25 buds adorn the northern side. Notably, the shaft is fractured just below the 3rd floral bud.
10.	East Corridor (North)	Pilaster-8	Capital 54 x 63 cm Shaft 248 x 48 cm Medallion Centre (Full)	On the central medallion, a fully bloomed lotus is depicted; half lotus medallions are missing on both the ends of the shaft. A leaf pattern band, featuring a flower motif,



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			27 x 27 cm Base 33 x 52 cm	adorns the pillar base. A continuous chain of 25 floral buds embellishes both sides. Notably, there appears to have been a break below the 5th bud, subsequently reattached. Three buds near the medallion on the south side are plain and small in size while others are carved with clear petal lines and are comparatively larger.
11.	East Corridor (North)	Pilaster-9	Capital 62 x 60 cm Shaft 248 x 46 cm Medallion Centre (Full) 27.5 x 27.5 cm Base 39 x 51 cm	The central medallion is a well-carved fully bloomed lotus; the presence of half lotuses is lacking at the top and bottom of the shaft. There are 25 flower buds on the western side and 24 on the eastern side. On the pillar base, a pair of dome-like motif with six-petal flower is meticulously carved. Notably, the shaft appears to have been mended below the 3rd bud from top. This pilaster is facing south.
12.	East Corridor (North)	Pillar-3	Capital 61 x 63 cm Shaft 251 x 44 cm Medallion Top (Half)	Each of the four sides of shaft boasts a fully bloomed lotus medallion, while half-bloomed lotuses grace the bottom section of the pillar shaft. Interestingly, the depiction of



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			missing Bottom (Half) 14.5 x 28 cm (Facing north) Bottom (Half) unfinished Centre (Full) 29 x 29 cm Base 37 x 54 cm	half medallions is missing from the top of the shaft. On the north-facing side, the lower half of the lotus is incomplete. The pillar base is concealed under a layer of cement plaster, and the decorative band on the base shows slight damage along the eastern and southern faces. The floral bud chains consist of varying numbers, ranging from 20 to 25 buds. The medallion near the eastern side lacks the presence of properly carved buds (unfinished) at both the sides.
13.	East Corridor (North)	Pillar-4	Capital 62 x 63 cm Shaft 246 x 47 cm Medallion Top (Half) 11 x 28 cm Centre (Full) 29 x 28 cm Bottom (Half) 14 x 28 cm Base 41 x 54 cm	Each of the four faces depicts a full lotus medallion in the centre and half medallions at the top and bottom of the pillar shaft. The pillar base is concealed under a layer of cement plaster, and the decorative band on the base shows slight damage on the eastern and southern sides. The flower bud chains consist of 26 buds. The medallion on the eastern face lacks the presence of properly carved petals.
14.	East	Pillar-5	Capital	On all four faces, lotus



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	Corridor (North)		61 x 64 cm Shaft 230 x 47 cm Medallion Half (top) 13 x 29 cm Full (centre) 29 x 29 cm Half (bottom) 14 x 28 cm Base 42 x 53 cm	medallions grace the pillar shaft. Half medallions adorn the top and bottom of the pillar shaft in all four directions, except for the north where the bottom half-bloomed lotus is partially carved. The pillar bases on the eastern and southern sides display the pair of dome-like motif embellished with six petals. The bases on the other two sides are concealed under a layer of cement plaster. A chain of 24 flower buds is exquisitely carved along all four corners.
15.	East Corridor (North)	Pillar-6	Capital 58 x 63 cm Shaft 250 x 47 cm Medallion Top (Half) 12 x 26 cm Centre (Full) 28 x 28 cm Bottom (Half) 12 x 28 cm Base 40 x 54 cm	A full lotus medallion occupies the centre, while half medallion grace the upper and lower portions on all four faces of the shaft. Embellishing each of the four corners is a chain of 26 flower buds except northeast corner which consist 25 flower buds. On the eastern side, the pillar base has a pair of dome-like motifs having a six-petaled flower motif in the centre. The remaining three sides of the base are concealed under a layer of cement plaster.
16.	East	Pilaster-	Capital	Positioned centrally is a fully



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	Corridor (North)	10	62 x 59 cm Shaft 248 x 46 cm Medallion Top (Half) 11 x 28 cm Centre (Full) 30 x 30 cm Bottom (Half) 11 x 28 cm Base 39 x 54 cm	bloomed lotus medallion, by half bloomed lotus above and below. A chain of 22 floral buds graces the two corners. The pilaster, facing north, is attached to the main entrance gate. The lower section of the pilaster's mouldings has been covered under cement plaster.
17.	East Corridor (South)	Pilaster- 11	Capital 57 x 59 cm Shaft 250 x 48 cm Medallion Top (Half) 12 x 26 cm Centre (Full) 26 x 26 cm Bottom (Half) 11.5 x 24 cm Base 31 x 53 cm	Facing east, the central medallion has a fully bloomed lotus, while half-bloomed lotuses adorn the top and bottom of the shaft. The pillar base is adorned with a pair of dome-like motif with incised flower design in the centre. Decorative chains of 22 floral buds are present on either corner.
18.	East Corridor (South)	Pilaster- 12	Capital 57 x 60 cm Shaft 249 x 48 cm Medallion Top (Half) 15 x 27 cm	Facing east, a fully bloomed lotus medallion adorns the centre together with half-bloomed lotuses on the top and bottom of the shaft. The pillar base is adorned with a pair of dome-like motif and



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			Centre (Full) 29 x 30 cm Bottom (Half) 13.5 x 29 cm Base 31 x 52 cm	incised flower motif. A chain of 26 floral buds adorn the corners. The 20th bud is damaged along the northern corner.
19.	East Corridor (South)	Pilaster-13	Capital 58 x 59 cm Shaft 251 x 47 cm Medallion Top (Half) 10 x 32 cm Centre (Full) 28 x 27 cm Bottom (Half) 29.5 x 12 cm Base 32 x 53 cm	East facing shaft is adorned with the central medallion and half lotus medallions grace the top and bottom. The pillar base features a pair of bulbous dome-like motif with an incised flower motif. On both the corners, a chain of 20 flower buds is intricately carved.
20.	East Corridor (South)	Pilaster-14	Capital 57 x 59 cm Shaft 250 x 47 cm Medallion Top (Half) 11.5 x 30 cm Centre (Full) 29 x 29 cm Bottom (Half) 14 x 29 cm Base	Facing east, a central medallion with a fully bloomed lotus is flanked by half-medallions on the top and bottom of the shaft. The pillar base is adorned with a pair of bulbous dome-like motif having a six-petal incised flower motif. A chain of 25 floral buds adorns each side.



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			29 x 53 cm	
21.	East Corridor (South)	Pilaster-15	Capital 58 x 61 cm Shaft 247 x 48 cm Medallion Top (Half) 13 x 29 cm Centre (Full) 32 x 32 cm Bottom (Half) 14.5 x 32 cm Base 39 x 54 cm	Facing south, the pilaster is adorned with a lotus medallion in the centre and half lotus medallions on top and bottom. The decorative band of the base is obscured by cement plaster. Notably, the shaft is fractured just above the medallion (below the 4th bud). There are 22 buds adorning the eastern corner, while the western corner of the pillar has a chain of 23 buds.
22.	East Corridor (South)	Pillar-7	Capital 62 x 64 cm Shaft 247 x 48 cm Medallion Top (Half) 14 x 29 cm Centre (Full) 29 x 29 cm Bottom (Half) 13 x 26 cm Base 38 x 55 cm	The four faces of the shaft depict complete medallion in the centre and half medallions on upper and lower ends. The lotus medallion on the western side is unfinished. The corners are adorned by a chain of 22 flower buds. The pillar base is covered under cement plaster on three sides. The side facing east features a pair of bulbous dome-like motif with floral depiction in the centre.
23.	East Corridor (South)	Pillar-8	Capital 58 x 63 cm Shaft 250 x 48 cm Medallion	The four faces are decorated with full medallion in the centre. However, the medallion on the eastern side is unfinished. The top and



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			Top (Half) 17 x 28 cm Centre (Full) 28 x 29 cm Bottom (Half) 14 x 29 cm Base 39 x 55 cm	bottom on all faces feature the usual combination of half medallions. But those on the eastern and western sides are incomplete. On each corner there are 22 floral buds arranged in a chain. The pillar base displays a pair of bulbous dome-like motif with floral depiction in the centre on the eastern side, while the other three sides are concealed under cement plaster.
24.	East Corridor (South)	Pillar-9	Capital 58 x 64 cm Shaft 251 x 48 cm Medallion Top (Half) 14 x 27 cm Centre (Full) 29.5 x 29 cm Bottom (Half) 14 x 28 cm Base 38 x 55 cm	All four faces show central medallion with fully bloomed lotus. The top and bottom of the shaft feature half medallion. The pillar base on three sides is concealed with cement, while the base facing east displays a pair of bulbous dome-like motif. A chain of 23 flower buds adorns all corners.
25.	East Corridor (South)	Pillar-10	Capital 60 x 61 cm Shaft 247 x 46 cm Medallion	A lotus medallion graces on each of the four directions. Both the upper and lower portion of the shaft feature half-bloomed lotuses. The



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			Top (Half) 12 x 28 cm Centre (Full) 27 x 27 cm Bottom (Half) 10 x 28 cm Base 39 x 53 cm	pillar base on three sides is concealed with cement plaster. The side facing east shows a leaf pattern. There are 20 flower buds at three corners, and the northeast corner has 21 buds.
26.	East Corridor (South)	Pilaster-16	Capital 59 x 60 cm Shaft 246 x 46 cm Medallion Top (Half) Missing Centre (Full) 26 x 27 cm Bottom (Half) 15 x 26 cm Base 36 x 52 cm	Facing north, a central medallion is present. Half-bloomed lotus medallion adorns the lower part of the shaft, while the upper carving is absent. The pillar base is concealed with cement plaster. A chain of 24 lotus buds decorate both the corners.
27.	South Corridor	Pilaster-17	Not measurable due to iron grills	
28.	South Corridor	Pilaster-18		
29.	South Corridor	Pillar-11		
30.	South Corridor	Pillar-12		



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Observations

Upon careful examination of the pillars and pilasters within the existing structure, it becomes evident that some of these architectural elements serve a secondary purpose. This secondary application is particularly noticeable on a number of pillars and pilasters, specifically around the central area of the shafts. On careful observation, it becomes apparent that the *vyala* figure which is found intact on two *in situ* pilasters in western chamber had been chopped off and the stone mass was recarved as lotus buds, as carved above and below. In several cases, the recessed corner originally featuring the *vyala* motif was modified and replaced with the repetitive flower bud chain. This replacement is identifiable by the difference in the execution of the later additions which are usually different in size and shapes from those carved originally. This observation finds reinforcement from specific instances, such as Pillar 5 and Pilaster 7.

Upon comprehensive analysis, it can be concluded that parts of pillars and pilasters reused in existing structure have been recarved later, seemingly in a hurried manner. This is especially evident in cases where the sides of lotus medallions are reworked which fail to meet the established standards.

At the either side of lotus medallion of the pillars and pilasters, there is a decorative flower bud chain carved which is running from top to bottom of the column. On the basis of depiction of *vyala* near the lotus medallion on the extant pilasters of the western chamber, it may be said that the other pillars and pilasters also had similar depiction.

Close inspection of the pillars and pilasters of the east corridor revealed, in several places, that the buds carved near the lotus medallion are irregular in shape and size as well as in their execution. These disconformities in what should have been uniform styles of execution suggest that the *vyala* were meant to be integral part of the decorative motif of the pillars and pilasters and that subsequently these depictions were removed and replaced with series of buds at the time of their reuse in the existing structure.



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Western Wall



Western Wall

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Western wall, oriented in north-south axis, comprises existing parts of the pre-existing structure and at the same time it forms west wall of the existing structure on Settlement Plot no. 9130. As it stands today, its exterior face is towards the west while along its eastern face stands the existing structure, which is a mosque.

Western wall can be divided in three distinct parts on the basis of the extant architectural features. The central part or the western chamber comprises of the blocked entrance incorporated within a true arch frame, the accompanying wall surface with corner niches and its northern and southern arms incorporating the extant halves of the cusped arched entrances. This central part effectively divides the lateral extensions of the western wall into northwest and southwest sides. As in the case of the central part, two subsidiary blocked entrances exist on the northern and southern extensions of the western wall. On plan the entrances at north and south exist in the same alignment while the central one is projected further westwards beyond the straight line of the west wall.

Western Chamber

The western chamber, the middle part of the western wall, houses the main entrance of the central chamber. The wall portion on either side turns at right angle to form corners having single niche on each wall surface. The walls to the north and south then give way to cusped arch entrances. Only the eastern halves of these entrances are extant. The extant architectural features suggest that this would have been the entrance porch to the pre-existing structure. The superstructure of western half of the architectural arrangement is missing.

The rectangular blocked entrance along the western face is incorporated within a large true arch. The wall surface below the arch and surrounding the blocked entrance is profusely decorated with architectural forms and embellished with floral and figural motifs. Framing the rectangular entrance is an elaborate *torana*. The vertical uprights of this *torana* frame the sides in the form of a tri-faceted pilaster. They are surmounted by tiered finials of which only the southern one is



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extant. The *torana* arch, carved on vertical stone slabs, comprises of three vertical tiered motifs placed equidistance from each other at varying heights and joined together by a thick and tiered rope-like decorative motif.

Though chopped off, some animal representations are noted at different places on the wall portion. Outline and impressions of two elephant heads with trunks upraised, one on each side of the faceted pilaster can be clearly made out. In addition, impressions of two flanking birds, probably peacocks, are seen below the *torana* arch. Similarly, impression of bird like figures are noted on the inside of the vertical uprights above the decorative rope motif.

The underside of the arch has a running decorative motif of floral pendants. The series begins with small figures of kneeling elephants with their trunks upraised at either end. The decorative series comprises of a tiered floral pendant alternating with three comparatively smaller size pendants. The arch rests on two vertical offsets. Beyond the offsets are the wall portions on either side.

The rectangular entrance within the *torana* has been blocked by stones, bricks, lime mortar and stone slabs. Some of the missing slabs reveal parts of the concealed doorframe. Part of the *lalatbimba* and the *patra-sakha* on top can be seen. The central figure on the *lalatbimba* has been chopped off.

The doorsill of the entrance revealed animal figures which have also been chopped off, leaving only a few remaining parts in various stages of preservation. Two of the figures towards the northern half of the sill are a bird figure, looking like a cock from the extant feathers and a seated animal looks like lion from the extant hind side and outline. The single extant specimen on the southern half of the sill survives only in the form of a upraised stone matrix which cannot be identified.

The lateral wall surfaces beyond the arched entrance frame have a niche on either side. Similarly the extant northern and the southern arm of the western chamber also has one such similar niche. All the niches have similar design. The base has a decorative band of trefoil motif. The upper corners of the niches curve



in. The resultant wall surface in the corner is embellished with stenciled floral motif, one on each corner. Above the niches is a decorative band of trefoil motif that runs across the wall surface dividing it into lower and upper wall surfaces.

The inner corner of the wall above the decorative band has a corner arch with vaulted roof within. The frame on either ends projects out of line of the walls giving the appearance of a recessed corner space. The vertical uprights on either side rise above frame of the arch to support a highly embellished superstructure. This takes the form of four ornamental horizontal bands. The lower register is a row of pendants. Above this is a band of trefoil motif. The next band has alternate floral diamond and medallion motif. The topmost register, biggest in dimension, is a row of triangular projections with their pointed ends extending out. On two face of this triangular surface are depictions of brackets. The intervening spaces are filled with pendants of varying sizes.

The corner arch with its vaulted roof within, is below these ornamental bands. The underside of the arch is embellished with a chain of flower bud motif. The corner wall spaces has floral medallion, one on each side. The arch frames the vaulted roof of the corner. Lotus petals adorn the ceiling of the vaulted roof. The wall below the arch is embellished with a large foliated diamond motif. A pendant adorns the inner corner. The uprights framing the arch have a pair of pendant on either side.

Above this wall rises the largely missing super structure. The ornamental band existing above the wall is octagonal in plan – only three faces surviving at present. This must have formed the base from which *shikhara* would have risen as a superstructure over the western chamber. The extant decorative band comprises of horizontal bands of lotus medallions placed within cusped niches. Pendants in groups of three on single pieces adorn the joints of two niches at the base.

The side walls give way to the extant cusped arch entrances on the north and south. Each has 7 cusps of which only the eastern half survives with the respective side walls. The cusped arches are a pair of twin arches – one on the



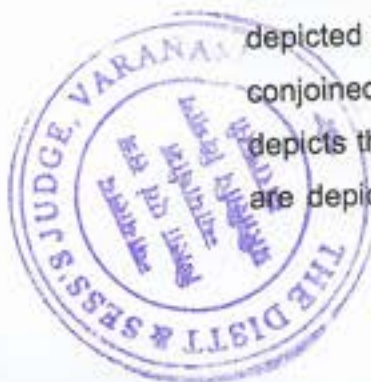
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inner side of the wall and one on the outer. The under surface of the arches are embellished with floral diamond motifs while the adjacent sides have small trefoil motifs. This decorative series of the cusps begins with figures of kneeling elephants (fore parts) with their trunks upraised. However, these animal figures have been chopped off and only the stone matrix survives. Thus each entrance had four such figures corresponding with the pair of twin arches.

The corner wall portion between the cusped arches and the rectangular frame of the entrance is embellished with a tiered floral motif of diminishing size – four concentric rings of petals around the upraised central six-petalled flower. Above the entrance of cusped arch is another storey with an extant semi-circular arch. The extant part on its underside has a decorative pattern of pendant floral decorations. The combination follows the same pattern as described in the case of the central arch. The two rectangular frames incorporating the arches are separated from each other by a decorative band of trefoil motif. This band continues all along the inner wall surface of the extant part of the chamber.

The outer surfaces of the arched entrances have slightly different architectural and decorative pattern conditioned in part of their forming an extension of the exterior arrangement of wall mouldings. The extant wall surface, facing south or north is characterised by the presence of a single pilaster (Pilasters 1 and 2). The base has a pair of bulbous dome-like motif. The shaft of the pilaster rises above the base and has a single lotus medallion in the centre. The shaft of the pilaster on the southwest side survives only along its eastern half. The medallion depicts a central bud around which is three concentric rings of petals.

On either side of the medallion and within recessed frames are depictions of *vyala*. The *vyala* figures are depicted standing on their hind legs. These figures survive in various stages of preservation on either pilaster. The best preserved is on the extant eastern recess of pilaster on the southwest side. The *vyala* is depicted standing on its lower limbs. The lower part of the figure shows two conjoined limbs. Two tails are depicted on either side of the figure. The upper half depicts the upright torso and the head, facing front. The upper limbs of the *vyala* are depicted going across the body, one above the other. The right limb is top



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and the left one below it. The most notable is the head of the animal. The most prominent is the overflowing mane on either side of the head. The face is characterized by protruding eyes and upraised ears. The muzzle of the animal is mutilated however, its rounded profile is extant on the right side.

The corners of the pilaster are decorated with vertical chain of flower buds. This floral motif continues above and below the recessed *vyala* figures. Above the pilasters are a series of horizontal mouldings. Above the mouldings are two decorative brackets oriented in north-south axis. The inner corners of the brackets are embellished with a tiered floral medallion. A similar bracket with a tiered pendant occupies the corner wall portion between the cusped arch and the rectangular frame.

The second tier of the frame with the semi-circular arch rises above the decorative band of trefoil motif. This wall surface is further embellished with a basal decorative band. This band comprises of a series of bulbous dome-like motif. On the corner is a pilaster having three slender and shallow rectangular recesses vertically arranged. The adjacent wall portion has an arched niche.

The inner face of the south side entrance has the only surviving example of the kneeling elephant that forms the base of the decorative band of the arch. This specimen is extant on the second tier of semi-circular arch. It depicts the fore part of a kneeling elephant with its trunk upraised. Another similar but broken specimen was found amidst the debris just below this entrance.

The removal of garbage and debris dumped in the western chamber brought to light certain other features of the internal plan of the chamber. Below the doorsill of the blocked entrance was revealed another basal stone alignment. This stone alignment evidently is the load bearing stone over which rests the entire entrance. At either corner it turns at right angle to form the northern and southern arm of the western chamber. The southern arm of the chamber could be traced westwards till a little distance before the grill fence. The western arm of the same could not be traced on account of space limitations and presence of security check post.



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The northern arm of this stone alignment could not be traced further westwards beyond the corner stone which turned at right angle.

Interestingly, another stone alignment at the upper level was also found. These decorated stone blocks were placed in a secondary context along the outer (southern) edge of the basal stone alignment. Three such blocks were placed in east-west axis. The inner side of these blocks had series of trefoil motifs. Similar decorative blocks kept in secondary context were also found continuing along the western arm. One complete block and a partial one were found.

This basal stone alignment in primary context was at the same level as the skirting stone around the base of the interior wall portion of the western chamber and continuing through the cusped arch entrance on either side. Admittedly, some of the skirting stones, especially around the inner corners are either missing or replaced with random pieces suggestive of subsequent repair.

Other courses of this basal stone alignment and associated features were also traced below the cusped arch entrance on the north side. Below the first level of skirting stone of the entrance was another stone alignment that continued below the pilaster base, extending northwards. On the same level, another stone block was found below the arch in east-west axis. Thereafter are two rectangular stone blocks, extending beyond the line of the east-west stone, was found. These blocks are notable for having the engraving of the base of the western arm of the cusped entrance with its central pilaster. This engraving of the outline of the pilaster base revealed that width of the entrance was 2.40 m.

Extending northwards in front of the eastern and western edges are further stone alignments. These stone alignments are in various stages of survival and at different levels. However, they are on the same plan with vertical offsets at different levels. The eastern arm, extending below the pilaster, continues northwards and then turns at right angle to continue eastwards. The eastward alignment continues till it reaches the west wall flanking the south side of the blocked western entrance of the north hall.



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Similarly, the western arm of the northern cusped arch entrance of western chamber continues northwards at different levels. It continues northwards beyond the turning point of its eastern counterpart. It turns at right angle to continue eastwards in alignment with the north side of the blocked western entrance of the north hall. It is noteworthy that this northern arm is extant only at the lowest level. All the upper stone alignments have been removed.

A stone drain was noticed in east-west alignment in front of the northern cusped arch entrance. This drain was running across the northern extension of structure in front of northern entrance of western chamber. Rain water coming in the open area to the northwest of main hall would have been drained out through this drain. Finished upper core of wall stones suggest that this open area was paved and therefore water falling at this level was drained out.

The entire 'L'- shaped area framed by the stone alignments extending from the northern cusped entrance to the blocked western entrance of the north hall is filled with lime concrete and stone blocks. It forms a solid and stable foundation to what must have been a cloistered approach between these two chambers of the pre-existing structure.

The same pattern would have been replicated along the southern entrance of the western chamber connecting the western entrance of south hall. However, since this area is modified as a stone and lime concrete platform, the same could not be ascertained.

Western Wall – Elevation

The northwest and southwest side of the western wall are marked by wall surfaces and blocked entrances to the north and south halls. The extant wall portion of the western wall has vertical offsets and horizontal mouldings throughout the exterior face. These vertical and horizontal members are distinctive feature of Hindu temple architecture and conform to construction and existence of a Hindu temple.



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The wall rests on the platform or *jagati* which comprises of dressed stone blocks. The lower parts were meant to be underground and hence devoid of any major embellishments. The platform is topped by the leaf motif or *pandasa*. The motif runs all through. There is a change in the *pandasa* motif into trefoil motif to the north and south wall surfaces beyond the blocked entrances on either side. Above this platform rises temple wall proper with all its distinctive vertical and horizontal members.

The entire elevation of the wall surface may be horizontally divided into three distinct parts – the lower series of mouldings (*adhithana*), the middle wall (*jangha*) portion and the upper series of decorative mouldings leading up to the level of the *shikara*.

The *adhithana* mouldings, from bottom to top, comprise of the lower band known as *khura* measuring about 22 cm and having small sized leaf like decoration on upper portion. This is followed by the *kumbha* portion. It is divided into two horizontal parts by a decorative band know as the *antarpatta*. The *antarpatta* contains two types of floral decoration, a circular motif alternating with a diamond shaped motif. Above the *kumbha* is the *kalasa* moulding. The two are separated by a recessed *antarpatta*. Above the plain *kalasa* is a series of decorative bands (3 in numbers) forming the *kapotavali*. Between each decorative band is a plain recessed *antarpatta*. The lower band of *kapotavali* depicts upward lotus motif, while the middle one depicts two rows of leaf motifs, pointed upwards and downwards, the third and uppermost row has a single row of downward leaf motif.

Above the *kapotavali* begins the *jangha*. The plain wall surface is divided into two horizontal sections by a decorative *antarpatta*. The decorative motif on this band is similar to that observed in the *kumbha* moulding mentioned above.

Over the exterior wall, there are a series of decorative bands placed in close succession over each other. The lowermost band, marking the end of the *jangha*, has the plain *pandasa* motif. The recessed band above it depicts a horizontal series of leaf motifs within tiered niches. The next decorative band again depicts the *pandasa* motif. However, in this band leaves are slightly elongated and are



pointed down. The next band is in fact a series of closely placed bands of varying profiles – flat and rounded. The topmost band, placed just below the bracket, depicts two rows of leaf like designs (facing up and down). Each of the major horizontal bands are separated from each other by recessed bands.

The crowning element of the extant wall portion is the brackets which support the overhanging cornice or *chajja*. On the top of the exterior bands the provision of beautifully carved and richly decorated stone brackets has been made to give the support to the *chhajja* provided on it. Both the brackets as well as the underside of the *chajjas* have decorative motifs.

Above the *chajjas*, some extant part of the western wall is seen along the inner corner of the northwest side. The extant single tier may have formed part of the superstructure.

In addition to the above horizontal mouldings, the western wall has a series of vertical offsets as well. These vertical offsets uniformly display the horizontal mouldings described above. Each of the main offsets have three vertical projections each on plan which are carried through the entire height of the extant wall structure. Along the wall portion on either side of the blocked north and south entrances these vertical offsets do not prominently project out.

In contrast, the offsets along the northern and southern corners of the central chamber at northwest and southwest sides respectively project out prominently. The corners have a set of three such vertical projections, *karnaratha* flanked with *pratiratha* on either sides.

Modifications and Reuse

Subsequent to the destruction of the pre-existing structure and before its reuse in the existing structure, certain parts of the the western wall were modified to adhere to its new usage.



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The wall portions above the now blocked entrances to the north and south halls and elsewhere above the mouldings were modified using bricks and lime mortar. This brick made portion is then plastered over with lime. The top of the wall was surmounted by a series of merlons. The presence of merlons made by using bricks and lime mortar stands out in sharp contrast to the original architectural pattern of the pre-existing structure, which is made of stones.

The northern and southern corners of the western wall were also altered. The presence of plain stone slabs on both the corners stands in sharp contrast to the adjoining moulded wall surface of the pre-existing structure.

The blocked entrances to the north hall and the south hall on the northwest and southwest sides respectively also underwent major structural changes. Both the entrances were blocked off with use of stone and mortar. The architectural design of facades of the entrances were completely razed.

Internally, keeping intact the outer and inner shells of the entrances and the adjoining walls the inner core was repurposed. The core was cut away to make provision for a flight of stairs giving access to the flat roof of the existing structure. The internal surfaces have been plastered over with thick lime plaster making it difficult to discern the original features of the pre-existing structure.

Currently, a small opening is functional in the western blocked entrance of the north hall, which gives access to the flight of stairs. A similar opening in the western blocked entrance of the south hall was blocked subsequently. However, access to the flight of steps in the southwest side from the top is still available.

Two inscriptions were found on two faces of an architectural member used to block the western entrance of the south hall from inside. In addition, mason's marks were also found on the ceiling above the stairs in the southern entrance. On the blocked up external façade in southwest side are also found inscribed stone slabs.



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Inscriptions



Sanskrit and Dravidian Inscriptions

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During the scientific investigations/ survey of existing structure a number of Sanskrit and Dravidian inscriptions were noticed on the pre-existing structure and existing structure. Most of these inscriptions which can be dated from 12th to 17th century have been reused in the structure, suggesting that the earlier structures were destroyed and their parts were reused in construction/ repair later.

The team of the Archaeological Survey of India took estampages of 32 stone inscriptions engraved in various locations on the structure under investigation. Apart from these stone inscriptions, 2 more inscriptions were also noticed, for which estampage could not be taken due to their inaccessible location. One inscription, engraved beneath the inscribed block located in the steps, could not be copied. The content of this inscription appears almost similar to Inscription no. 29. The other inscription is noticed engraved on a slab built into the roof of entrance. From the minute gap visible among the slabs, only few letters could be noticed. A rubber cast was prepared for getting the impression of the engraved surface which seems to resemble those used in the inscriptions issued during the Gahadwala period.

Of the 32 inscriptions, which were copied, only one inscription gives date as Samvat 1669, which corresponds to 1613 CE, January 1, Friday. All the other inscriptions can be dated on the basis of palaeography. Of the 34 inscriptions, 1 each can be dated to 12th and 15th century CE, 2 inscriptions to 16th century CE and 30 inscriptions to 17th century CE.

Majority of the inscriptions are in damaged or fragmentary or worn-out condition and some are painted, hence illegible. Of the 34 inscriptions, only 3 are in good state of preservation. From a comprehensive analysis of the data collected from these inscriptions it can be known that they were mainly engraved by the pilgrims visiting the place spanning over three centuries (i.e. from 15th to 17th century CE). From the information preserved in the inscriptions, four kinds of activities of the pilgrims can be noticed—

(1) to offer obeissance to the deity (5 inscriptions)



- (2) to do some pious work, exact nature is not clear (3 inscriptions)
(3) to make provision for burning a lamp (1 Inscription) and
(4) to burn a perpetual lamp (1 Inscription).

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The inscriptions provide a mine of information on personal names. Total 14 personal names have been identified: Sajālla (Insc. No. 1), Āryāvātī (Insc. No. 2), Śumbhājī, Sōnājī (Insc. No. 5), Mallana-bhaṭṭu, Nārāyaṇa-bhaṭṭu (Insc. No. 6), Jivāntadēva (Insc. No. 8), Nārāyaṇa Rāmaṇ (Insc. No. 9), Parhḍita Malavīdhara (Insc. No. 17), Raghunātha (Insc. No. 18), Dōḍarasayya, Narasaṁṇa (Insc. No. 26), Kāsī (Insc. No. 27), Kānha (Insc. No. 28).

Three names of deities such as Janārdhana (Insc. No. 08), Rudra (Insc. No. 16) and Umēśvara (Insc. No. 32) are also found mentioned. One epithet Paramamānīyakadēva is known from inscription no. 24.

The term Mahā-mukṭimaṇḍapa is mentioned in three inscriptions (i.e., no. 4, 8 and 29). This is of great significance as it helps in establishing existence of the famous abode of Shiva, as mentioned in ancient texts.

These inscriptions also provide architectural terms such as temple and dīpamōlaka from inscription no. 18. This again indirectly help in inferring this information to relate it with famous Shiva temple.

Names of territorial division such as Lashumadēśa and Kuṁkālamaṇḍala is known from inscription no. 28.



Inscription No.	01
Date/ Period	17th Century CE
Location	NW (N) / I 01 / S/14
Measurement of Stone slab	32 x 23 cm
Language	Local dialect
Script	Nagari
Text	1. . . . तमनर . . 2. . सि सजाल्ल
Gist	Mentions the name of a person Sajālla. Palaeographically datable to 17th century CE.

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Inscription No. 02

Date / Period 17th Century CE

Location NW(N) / I 02 / J/15

Measurement of Stone slab 37 x 172 cm

Language Sanskrit

Script Nagari

Text

1-4. lines are damaged

5. मो...

6.... ज

7.... ना

8. मे वर्षे

9.....

10... स

11. आर्यवतीनामु.

12. उनवी जय-

13. दामो तेषां

14. आजीस .

15. स... ज

16.....

Gist

Worn-out. Mentions the name of a person Āryāvātī. Other details are not clear. Palaeographically datable to 17th century CE.



Inscription No.	03
Date / Period	17th Century CE
Location	W(S) / I 03 / L/16
Measurement of Stone slab	81 x 19 cm
Language	Local dialect
Script	Nagari
Text	1. म . . . 2- 5 lines are damaged 6. अन . . . 7. 8. ना 9 to 13 lines are damaged 14.ल्लन ॥
Gist	Damaged and worn-out. Purport not clear. Palaeographically datable to 17th century CE.

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Inscription No. 04
Date / Period 17th Century CE
Location W(N) / I 04 / I/19
Measurement of Stone slab 152 x 16 cm
Language Sanskrit
Script Nagari
Text
1. [मं]हामुक्तिमंड[पे]
2. न्नोमै(नौमि) जाने-

Gist Worn-out. Records the obeisance made by an individual (name not mentioned) in Mahā-mukti maṇḍapa. Palaeographically datable to 17th century CE.



Inscription No. 05
 Date / Period 17th Century CE
 Location W(N) / I 05 / Q/20
 Language Local dialect
 Script Nagari
 Text Top*:
 1. . . .
 2. . म देवो

Bottom*:
 1. शुभाजी व . . .
 2. सोनाजी सो . .

*Engraved vertically

Gist Worn-out. Mentions names of two individuals i.e., Śumbhājī and Sōnājī. Other details are not clear. Palaeographically datable to 17th century CE.



Inscription No. 06
 Date / Period 17th Century CE
 Location W(N) / I 06 / P/20
 Language Telugu
 Script Telugu

Text
 1. వరుకు
 2. నారాయ-
 3. ణభట్ల కొడు-
 4. కు మలన భ-
 5. ట్లు వి[చ్చేసివా]-
 6. రిన్ని ...
 7.....
 8..... [ధని]

Transliteration:

1. వరుకు
 2. నారాయ-
 3. ణభట్ల కొడు-
 4. కు మలన భ-
 5. ట్లు వి[చ్చేసివా]-
 6. రిత్తి ...
 7.....
 8..... [ధని]



Gist
 Damaged and incomplete. It mentions some individuals namely Mallana-bhaṭṭu, son of Nārāyaṇa-bhaṭṭu. Palaeographically datable to 17th century CE.



Inscription No. 07

Date / Period 17th Century CE

Location W(N) / I 07 / M/20

Script Nagari

Text
 1. . . .
 2. . . नी .
 3. . . सा
 5-10 lines are damaged.

Gist Purport not clear. Damaged and worn-out. Palaeographically datable to 17th century CE.

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Inscription No. 08
Date / Period 17th Century CE
Location W(N) / I 08 / J/20
Language Sanskrit
Script Nagari

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Text
1. [म*]हामुक्ति-
2. मंडप(पे) दत्तो
3. मरा(रु)लौके
4. मेगो(को) ज-
5. नार्धन
6. श्री जिवान्तदेव

Gist Worn-out. Records the obeisance to Janārdhana (i.e., Vishṇu) made by an individual Jivāntadēva in Mahā-mukṭi maṇḍapa. Palaeographically datable to 17th century CE.



Inscription No. 09
 Date / Period 17th Century CE
 Location SW(S)/I 09-A / K/22
 Language Tamil
 Script Grantha
 Text 1. नारायण[ण]
 2. रामण स-

Gist Worn-out. Seems to refer some charity instituted by Nārayāṇa Rāmaṇ. Palaeographically datable to about 16th-17th century CE.



Inscription No.	10
Date / Period	17th Century CE
Location	SW(S)/I 09-B / K/22
Language	Local dialect
Script	Nagari
Text	1.... हेमोज 2.... च
Gist	Damaged and worn-out. Mentions the name of a person hēmōja. Other details are not clear. Palaeographically datable to about 17th century CE.

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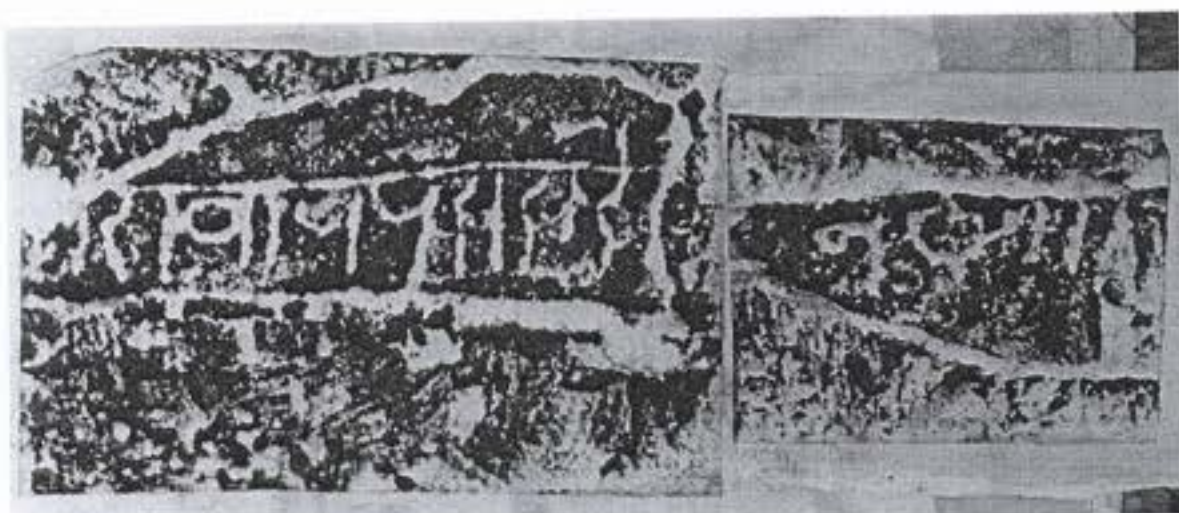
Inscription No.	11
Date / Period	17th Century CE
Location	SW(E)/I 10 / M/24
Script	Nagari
Text	1. ... 2. श...
Gist	Damaged and worn-out. Purport not clear. Palaeographically datable to 17th century CE.

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Inscription No.	12
Date / Period	17th Century CE
Location	SW(E)/I 11 / M/33
Language	Local dialect
Script	Nagari
Text	1. . . . रावा . पससडे न.
Gist	Worn-out. Purport not clear. Palaeographically datable to 17th century CE.

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Inscription No.	13
Date / Period	16th Century CE
Location	SC(E)/I 12 / P5(D)
Language	Sanskrit
Script	Nagari
Text	1. ... श्रीमच्छा 2. ... पा भृगुवास- 3. ... वद्विजातिश्च 4. ... ज्ञाय अर्जनी 5. ... णरायैः परोप 6. ... जातिभिः धर्मज्ञः।

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Gist Fragmentary. Mentions Bhṛiguvāsara (i.e. Thursday) in line no. 2 and Dharmajña in line no. 6. Other details are not clear. Palaeographically datable to 16th century CE.



Inscription No. 14

Date / Period 17th Century CE

Location SC(E)/I 13 / WC

Script Nagari

Text

1. जु

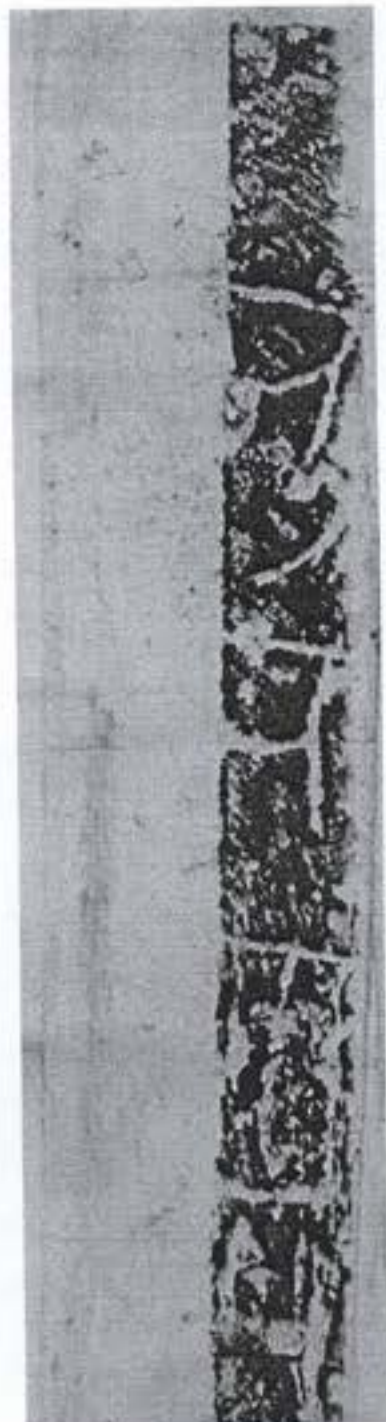
2. प

3. .

4. .

The inscription is engraved
indifferently.

Gist Worn-out. Purport not clear.
Palaeographically datable to
17th century CE.



Inscription No. 15

Date / Period 17th Century CE

Location NC(Door)/I 14 / LC-1

Language Local dialect

Script Nagari

Text

1. अ .
2. श्री . केसु ना .
3. . न .

Gist Worn-out. Mentions the name of a person . kesu. Other details are not clear. Palaeographically datable to 17th century CE.



Inscription No. 16

Date / Period 17th Century CE

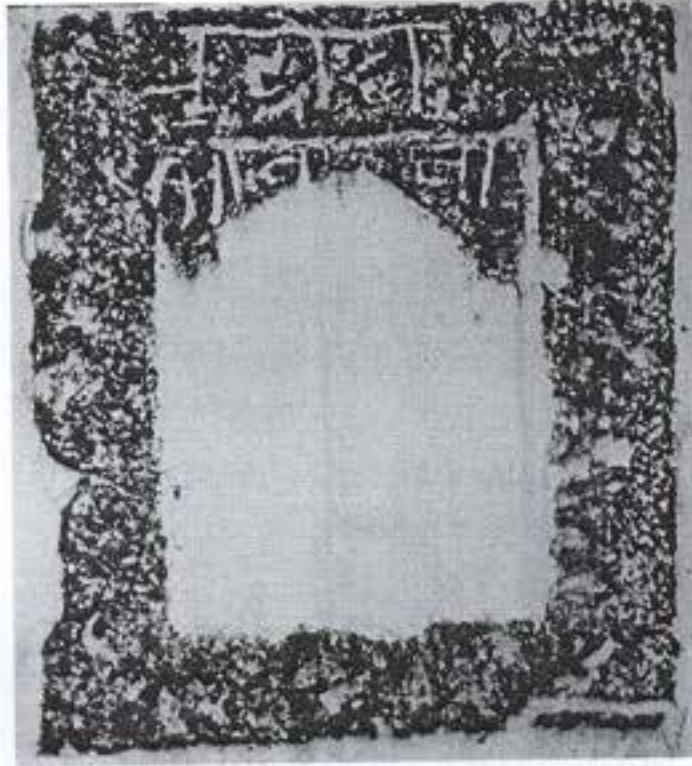
Location NC(W)/ I 15/P3/C1

Language Sanskrit

Script Nagari

Text
1. रुद्राद्या
2. श्रावना

Gist Incomplete. Seems to mention Rudrā (i.e. Śiva) in line 1 and name of the month Śrāvaṇā in line 2. It is written in Sanskrit language and Nagari characters. Palaeographically datable to 17th century CE.

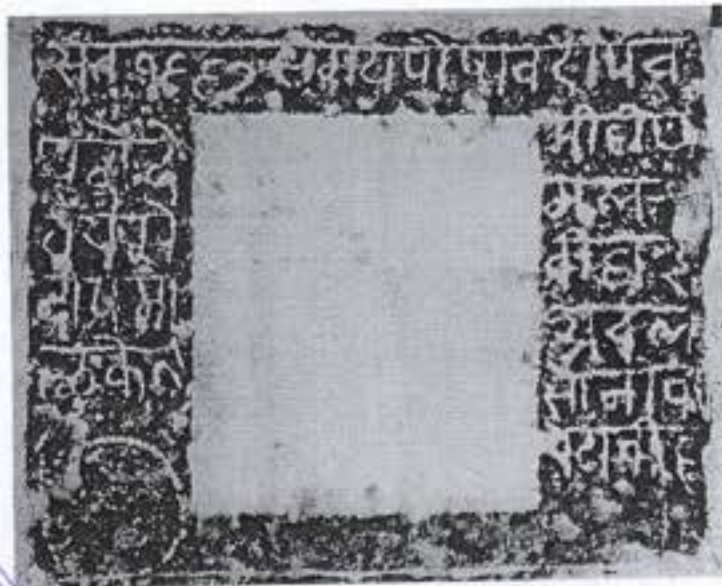


Inscription No.	17
Date / Period	Sarhvat 1669, Pushya vadi 5 (1613 CE, January 1, Friday)
Location	NC(W)/I 16/ P3/C2
Language	Sanskrit
Script	Nagari
Text	1. सं[व*]त् १६६९ समये पौष्य वदी पंच- 2. मी श्री पं- 3. मल- 4. वीधर 5. श्रवल(ण) 6. सानीद्य

4047
100

Gist

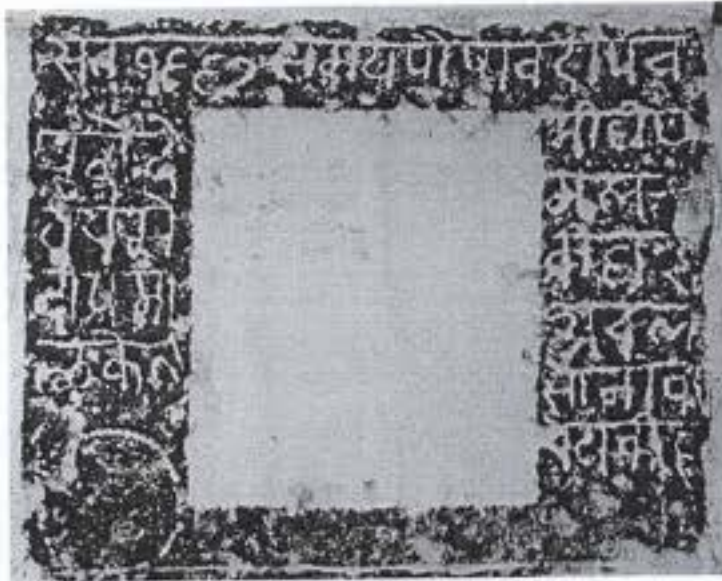
Seems to record some pious work in the temple by Parṁ (i.e. Parṁdita) Malavīdhara on the 5th day of the dark half of the month of Pushya in the year Sarhvat 1669, which corresponds to 1613 CE, January 1, Friday. It is written in Sanskrit language and Nagari characters.



Inscription No.	18
Date / Period	17th Century CE
Location	NC(W)/I 17/ P3/C3
Language	Sanskrit
Script	Nagari
Text	1. रु(रौ)द्रोदे 2. वरसे 3. दीपमो- 4. लकेन 5. श्रीरघुनाथ

* Line 5 is engraved in between inscription no. 16 and 17.

Gist This inscription is engraved near inscription no. 16. It seems to record the making of provision for burning a lamp by Raghunātha in the cyclic year Raudra. Palaeographically datable to 17th century CE .



Inscription No. 19

Date / Period 17th Century CE

Location NC(W)/I 18/ P3/B

Script Nagari

Text
 1. का.
 2. म..
 3....

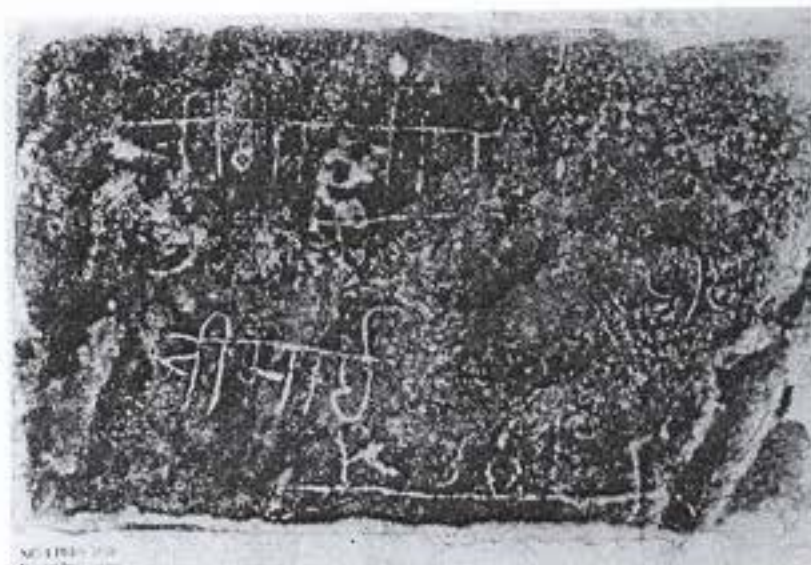
Gist Damaged and Worn-out. Purport not clear. Palaeographically datable to 17th century CE.

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102



Inscription No.	20
Date / Period	17th Century CE
Location	NC/ I 19/RS 25(l)
Language	Local dialect
Script	Nagari
Text	1. चीमाई 2. चीमाई 3.
Gist	Worn-out. Purport not clear. Palaeographically datable to 17th century CE.

4047
103



Inscription No. 21
 Date / Period 17th Century CE
 Location NC/ I 20/RS 25(ii)
 Language Telugu
 Script Telugu

Text

I. ఆన [ఎ] తిన గోవి

Transliteration

ఆన వి(ए)तिन गोवि

Gist

Incomplete. Purport not clear.

Palaeographically datable to 17th century CE.



40477
 104



Inscription No.	22
Date / Period	17th Century CE
Location	NC/ I 21/RS 28(i)
Language	Local dialect
Script	Nagari
Text	1. जे ना . 2. उदाबो . .
Gist	Worn-out. Purport not clear. Palaeographically datable to 17th century CE.

6045T
105



Inscription No.	23
Date / Period	17th Century CE
Location	NC/ I 22/RS 28(ii)
Language	Local dialect
Script	Nagari
Text	1.... नस 2. ये 3. सामी . सपेत
Gist	Worn-out. Purport not clear. Palaeographically datable to 17th century CE.

404-57
106



Inscription No. 24
 Date / Period 17th Century CE
 Location NC/ I 23/RS 32
 Language Sanskrit
 Script Nagari

Text
 1. श्रीपरममानीयकदेव
 2. . . पुण्यैकरः
 3. . . पुरजन

Gist Worn-out. Seems to record some pious work in the temple by a person (name lost) and it mentions an epithet "Paramamānīyakadēva". Other details are lost.
 Palaeographically datable to 17th century CE.



Inscription No. 25

Date / Period 17th Century CE

Location NC(W)/ I 24/P6 – P7 - Beam

Language Local dialect

Script Nagari

Text 1.... ननब्ज

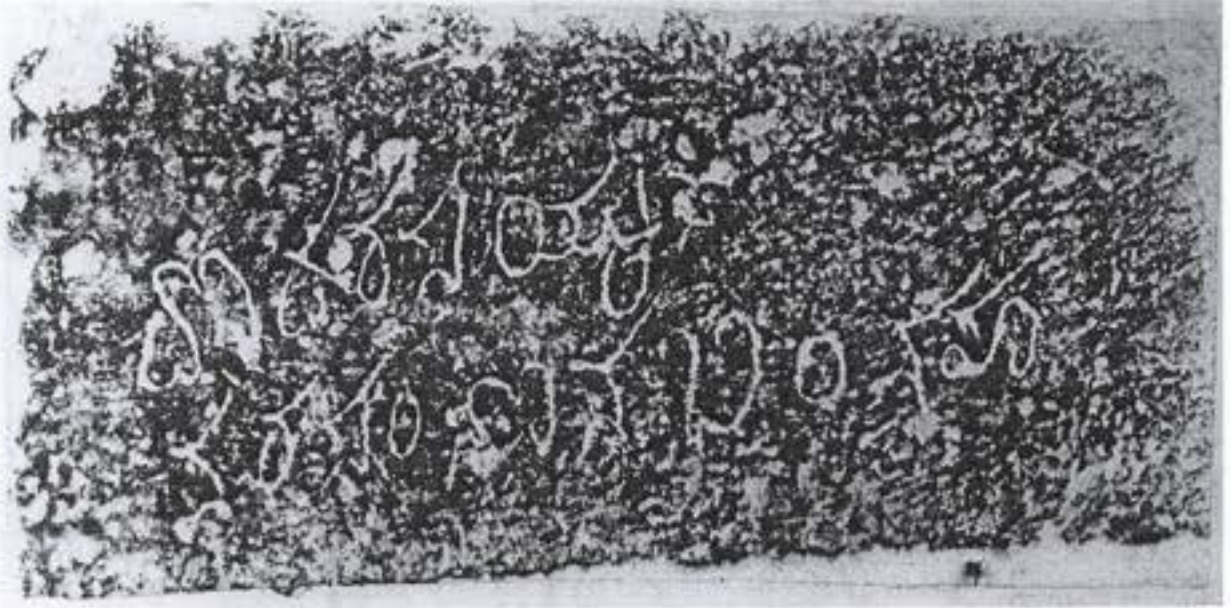
Gist Worn-out. Purport not clear. Palaeographically datable to 17th century CE.

40951
108



Inscription No.	26
Date / Period	16th Century CE
Location	NWC(N)/ I 25/(i) Beam
Language	Kannada
Script	Kannada
Text	1. ದೊಡರಸಯ್ಯನ 2. ನರಸಂಣನಭಿಂನಹ Transliterations: 1. ದೊಡರಸಯ್ಯನ 2. ನರಸಂಣನಭಿಂನಹ

Gist It records the obeisance by two individuals, viz. Dōḍarasayya and Narasaṅṇa. Palaeographically datable to 16th century CE .



Inscription No.	27
Date / Period	17th Century CE
Location	NWC(N)/ I 26/(ii) Beam
Language	Local dialect
Script	Nagari
Text	1. कासी
Gist	Mentions Kāśī. Palaeographically datable to 17th century CE.

40457
110



Inscription No.	28
Date / Period	17th Century CE
Location	NM(E)/ I 27/19th step.
Language	Sanskrit
Script	Nagari
Text	1.... स्याकस्य 2..... लये 3. कान्होलषुम- 4. देशोकुंकाल* मंड- 5. ल्यांकमा . 6..... ला 7.....

* काल engraved below the fourth line.

Gist	Worn-out and damaged. Seems to record some pious work in the temple by a person Kānha, who hailed from Lashumadēśa and Kuṁkālamāṇḍala. Other details are lost. Palaeographically datable to 17th century CE .
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Inscription No.	29
Date / Period	17th Century CE
Location	SN(E)/ I 28/ wall steps / C
Language	Sanskrit
Script	Nagari
Text	1. [म*]हामुक्ति 2. मंडप(पे)दत्तो 3. मैरोर्लो- 4. कैला ..

6047
112

Gist

Worn-out and damaged. It seems to records the obeisance made by an individual (name not mentioned) in Mahā-muktimanḍapa. Other details are lost. Palaeographically datable to 17th century CE.



Inscription No. 30
 Date / Period 15th Century CE
 Location Main Entrance /north side (S) / I 29
 Language Telugu
 Script Telugu
 Text

1. మహా
2.
3.
4. [శి]. న ...
5. [దీపను] ..
6.
7. 0కును .
8. హద . మ
9. మవి [రతి]
10. డుహచ్చ .
11. ర .
- 12 - - 14 lines are completely worn-out.

Transliteration

1. महा
2.
3.
4. [शि]. न ...
5. [दीपनु] ..
6.
7. कुनु .
8. हद . म
9. मवि [रति]
10. डुहच्च .
11. र .
- 12 - - 14 lines are completely worn-out.

Gist

Painted, damaged and worn out. Seems to record some gift for burning a perpetual lamp. Other details are lost.
 Palaeographically datable to 15th century CE.



Inscription No. 31

Date / Period 17th Century CE

Location NH(N) / I 30 / Inside A2

Script Nagari

Text 1-4 Lines are damaged.
5. ग ...
6 - 10 lines are illegible.

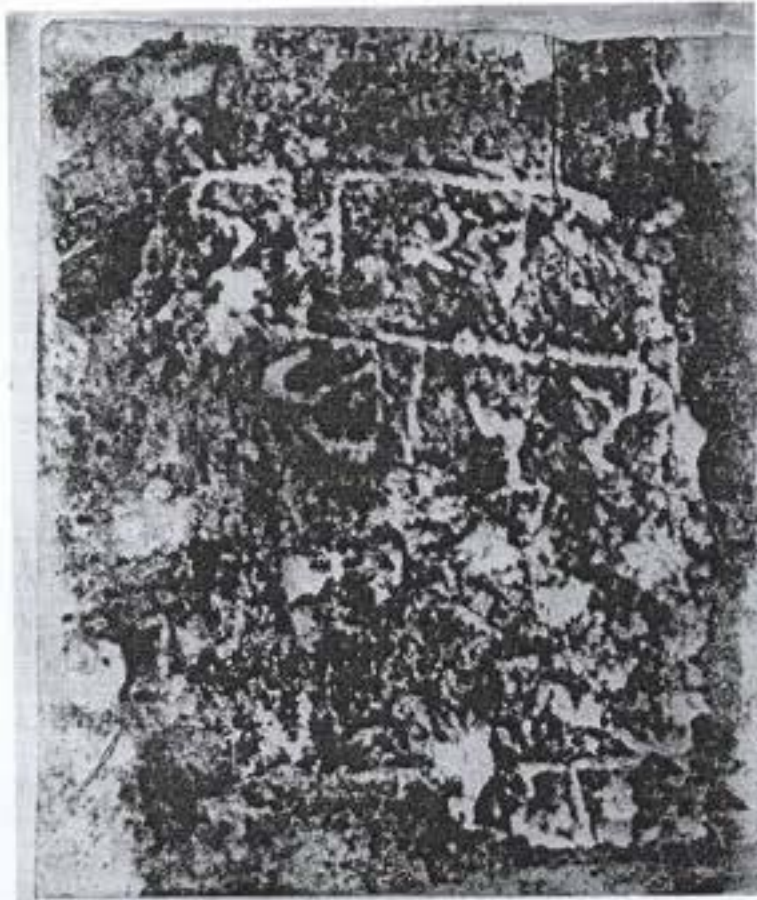
Gist Painted, damaged and worn out. Purport not clear.
Palaeographically datable to 17th century CE.

40477
114



Inscription No. 32
 Date / Period 17th Century CE
 Location NH(S) / I 31 / Inside A4
 Language Sanskrit
 Script Nagari
 Text
 1. उमेश्वर
 2.
 3. ... य

Gist Painted, damaged and worn out. It mentions Umēśvara in line no. 1. Other details are lost. Palaeographically datable to 17th century CE.



Inscription No. 33

Date / Period 12th Century CE

Location N3/ D3/ Lintel

Language Sanskrit

Script Nagari

Text

...

...

...

...

... यो .

... न

... मा

महाचद

...

Gist

Engraved surface is facing inwards with narrow space,insufficient to either read or take estampage. Rubber cast helps in reading some of the words. Other details are lost.

Palaeographically datable to 12th century CE.



Arabic and Persian Inscription

4047/17

A loose slab lying in the lower store room made in south corridor of the existing structure was copied and compared with the previous record available with the ASI. Inked estampage of the loose slab, curvilinear in shape was prepared after proper cleaning.

Location

Provenance: loose slab (with curve on top) lying in lower store room made in south corridor of the existing structure.

Nature of Stone: Sandstone

Size of Stone

Length: 106 cm

Thickness: 20 cm

Central width: 50 cm

Text

6 lines (lower 2 line are mutilated/ damaged)

Language: Arabic and Persian

Script: Nashkh and Nastaliq

Prototype: Un-dynastic

Dates

1. Sana Julus 20 of Alamgir (Mughal Emperor Aurangzeb) = Regnal year 20 (A.H. 1087) = 1676-77 CE
2. A.H. 1207 = 1792-93 CE

Transliteration of the Inscription

- (1) Allahu Akbar
- (2) Bismillahi – Ar-Rahman-Ar-Rahim
- (3) Ashadu anna La ilah ilallah waha duhu
- (4) La Sharika lahu wa Ashadu anna Muhammadan abduhu wa rasuluhu



- (5) Dar Sana 20 Julus Hadrat Alamgir een Jami masjid tayyar Shuda
 dar sana 1207 Hijri al Muqadas
- (6)muruthi masjid a musufa murammate sahna waghaire numudeh.

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Translation

- (1) God is great
 (2) In the name of god (Allah), most merciful most compassionate
 (3) I witness that there is no God but Allah who is one and alone.
 (4) He is without partner and I witness that Muhammad is his slave and messenger.
 (5) in the 20th regnal year of the Hadrat Alamgir i.e. Mughal Emperor Aurangzeb, this mosque was built In 1207 Hijri (1792-93 CE)
 (6) the said mosque came to be repaired with Verandah and like that.

Gist of the Inscription

This Arabic and Persian inscription comes from a loose slab and runs in 6 lines of which last two lines have been mutilated purposefully. The inscription states that this mosque was constructed in the 20 regnal year of Aurangzeb Alamgir corresponding to 1676-77 CE and was repaired with Verandah and other parts in 1207 Hijri corresponding to 1792-93 CE.

The above description and decipherment of the said inscription is done by direct observation of loose slab lying in the lower store room of the existing structure.

Previous Record (1965-66)

Office of the Director Epigraphy, Arabic and Persian inscription, Archaeological Survey of India, Nagpur had copied this inscription in 1965-66. Its estampage is preserved in ASI records and the transcript and gist were published in *Annual Report on Indian Epigraphy*, Appendix – D, no. 611, 1965-66.

Earlier copy (undamaged) reads as follows:

Transcript

- (1) Allahu Akbar



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- (2) Bismillahi – Ar-Rahman-Ar-Rahim
- (3) Ashadu anna La ilah ilallah waha duhu
- (4) La Sharika lahu wa Ashadu anna Muhammadan abduhu wa rasuluhu
- (5) Awwal be hukam e wala Dar Sana 20 Julus Hadrat Alamgir een Jami masjid tayyar Shuda baduhu dar sana 1207 Hijri al Muqadas
- (6) Sayyid Mirath Ali mutawalli muruthi masjid e musufa murammat e sahna waghaire numudeh.

Transcript (in Devnagari)

- (1) अल्ला-हुअकबर
- (2) बिस्मिल्लाहि -अर-रहमान-अर-रहीम्
- (3) अशहदु अन् ला इलाह इलल्लाह वहदुहु:
- (4) ला शरीक लहु व अशहदु अन्न मुहम्मदन् अब्दुहु व रसूलुहु
- (5) अव्वल बे हुकम ए वाला दर सन् २० जुलूस हजरत आलमगीर ईन जामि मस्जिद तैयार शुद: बअदुहु दर सन् १२०७ हिजरी अल मकदस
- (6) सैय्यद मीरास अली मुतवल्ली मुरुसी मस्जिद ए मुसुफ़: मरम्मत ए सहन: वगैरे: नमुदे:

Translation

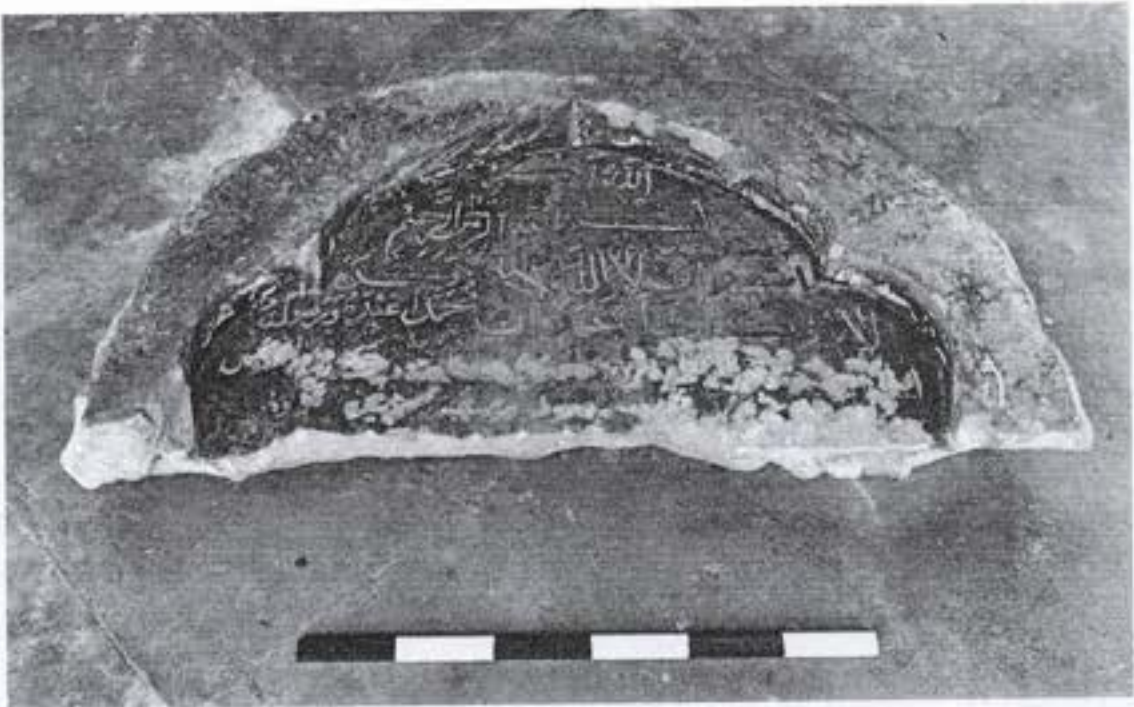
- (1) God is great
- (2) In the name of Allah (God), most merciful most compassionate
- (3) I witness that there is no god but Allah who is one and alone.
- (4) He is without partner and I witness that Muhammad is his slave and messenger.
- (5) By the order in the 20th regnal year of the Hadrat Alamgir i.e. Mughal Emperor Aurangzeb, this mosque was built. In 1207 Hijri (1792-93 CE)
- (6) the said mosque came to be repaired with Verandah and like that by Sayyid Mirath Ali Mutawalli.



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Estampage of inscription taken in 1965-66 (source: ASI, Nagpur)



Inscribed stone slab, 2023



$$\frac{4045}{121}$$

7

STATE *Uttar Pradesh* Acc. No. *3915*
A.R. No. of 196-6-6

Village: *Varanasi* District: *Varanasi*
Taluk/Sub-division: *Varanasi*
Provenance: *Ganga Ghat, Varanasi, Lower Ganga, Left bank*

TEXT

(1) *الحمد لله*
(2) *بسم الله الرحمن الرحيم*
(3) *اشهد ان لا اله الا الله وحده*
(4) *لا شريك له واشهد ان محمد عبده ورسوله*
(5) *اول ما جاء من سورة الفاتحة*
(6) *الحمد لله على نعمه العظيمة*

Dynasty King
Date

Language Date Script
Arabic *1412 H* *Arabic*
Urdu

Published in:

UPS 29-4-65/500

Documentation of inscription in 1965-66 (source: ASI, Nagpur)



4045T
122

Mason's Marks



Mason's Marks

90457
123

A variety of symbols/ marks or small epigraphs are found engraved on different parts of ancient structures. They are unique, individual marks to identify the owner/ professional mark of the master craftsman. These marks are known as mason's marks. There are different opinion among the scholars about the exact purpose of these marks. These engraved symbols/ letters on dressed stone blocks used in the construction of ancient buildings and structures are classified in three broad groups. The Banker marks - to identify the mason who had prepared the stones blocks to their paymaster; the Assembly marks - to ensure the correct installation of important pieces of stonework; and the Quarry stone marks - to identify the source of a stone, or occasionally the quality.

In Indian context, mason's marks are common in secular buildings as well as in religious structures of different pantheon. During the medieval period these mason's marks were very common on all types of structures. Not only the mason's marks but some of the specific symbols used in building are also common and found on all types of structures belonging to different periods.

While understanding the purpose of these mason's marks it is necessary to understand the process of preparing a stone block for constructing a building. Three important steps are involved in preparation of architectural members for construction, i.e., cutting of stone block of particular size at the quarry site itself; its chiseling and fine dressing; and using it on the particular location.

If these symbols have been marked at the quarry site to identify the specific quarry, then there is probable chance that these marks may go away during the course of its chiseling and fine dressing. Hence in most of the cases it was observed that the marks were put at the site of construction where they have been finally prepared for the use. But in some cases, it is also noticed that the marks have put after defacing the previous one. There is another possible explanation given regarding these mason marks to verify the work done by the specific group for wages purposes.



40457
1247

Mason's Marks on the Structures

During the course of scientific survey of the structures standing on the Settlement Plot No. 9130 at Varansi, various types of symbols have been found on the wall surface. Seven different types of symbols have been recorded out of them Trident and Swastik are maximum in number.

Trident have further three to four sub-types and similarly Swastik is also having as many sub-types. The majority of marks (symbols) are found on the western wall, which is mostly undisturbed part of the pre-existing structure and forms part of the existing structure. Marks are also noticed on other parts of the existing structure – central hall, north hall, south hall, all corridors and cellars. On careful examination of the exterior surface of the western wall, it is observed that the concentration of marks in different parts of the same wall are varying in terms of its type, which suggest that architectural components used in the construction of western wall would have been prepared by different groups of masons, deployed for this purpose.

The northern part of western wall and northwest side contains trident symbol of different sizes ranging from 4 to 15 cm. Further the arrangement of trident on wall surface are different. Some of the marks have their orientation from north to south and some of them are from south to north. Some of the tridents are engraved pointing upward or downward. The exterior wall of the western chamber facing north contains different types of symbols, i.e. double knot and single knot except one very small trident engraved on upper level of *pandasa*. South facing wall of western chamber is mostly free from these marks except one unidentified symbol engraved in the lower portion just above the floor level. The west facing wall of western chamber (north side of main entrance to central chamber) contains various sizes of trident in different orientation and shapes as well. The most significant aspect of tridents here are their sizes which are bigger in comparison to other parts of western wall. The other side of the wall facing west (south side of main entrance gate to the central chamber) bears two types of marks on its surface which is double knot and swastik. But the double knots are in majority numbers. North face of western chamber contains only swastik symbols. The southern face of the arched gateway of western chamber and first projection of



the exterior wall of southwest side of western wall contains swastik and double knot symbols of various sizes. The stone veneering of the western entrance of south hall facing west bears two types of marks, i.e. swastik and trident. The remaining portion of the exterior of the western wall contains mostly double knots but presence of trident and swastik can also be seen.

The interior of central hall also bears the same marks but it is difficult to identify because of use of thick layer of synthetic paint on the surface. The marks are also found in the corridor and in cellars as well but limited in numbers.

Out of the above referred marks found on the structure, swastik and trident are maximum in number and are also considered to be auspicious.

The most common and most important mark is the 'swastika'. It is known to be one the most ancient symbols in the world, and has been used in all old civilization. In India this symbol is considered very auspicious by Hindus.

Another important symbol is the 'trishula' (trident) the distinct weapon of Lord Shiva. This divine symbol is commonly used as one of the principal symbols by Hindus, particularly by Shaivites and also Shaktas.

Variety of these marks on the structures were studied in detail and documented. Distribution of these marks on the western wall was documented meticulously and presented in tabular form (volume 4, pp. 237-238).



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Measurements



Measurements

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Sl. No. **Structures/ Areas** **Measurements (in Meters)**

Structures at Level 1

1.	Cellar N1	
	Entrance 1	
	Length	1.63
	Width	1.06
	Entrance 2	
	Length	1.68
	Width	1.05
	Entrance 3	
	Length	1.70
	Width	1.08
	Entrance 4	
	Length	1.65
	Width	1.04
2.	Cellar N2	
	Length	13.85
	Width	5.69
3.	Eastern row	
	Door to Pillar 1	3.13
	Pillar 1 to Pillar 2	2.70
	Pillar 2 to Pillar 3	2.45
	Pillar 3 to Pillar 4	2.42
	Pillar 4 to Back wall	2.15
	Western row	
	Back wall to Pillar 5	2.15
	Pillar 5 to Pillar 6	2.40
	Pillar 6 to Pillar 7	2.48
	Pillar 7 to Pillar 8	2.70
	Pillar 8 to Main entrance	2.45
4.	Cellar N3	
	Length	12.43
	Width	3.06
	Entrance 1	
	Length	1.72
	Width	0.99



Sl. No.	Structures/ Areas	Measurements (in Meters)
	Thickness	1.02
	Entrance 2	
	Length	1.75
	Width	1.02
	Thickness	1.02
	Entrance 3	
	Length	1.84
	Width	1.00
	Thickness	1.02
	Entrance 4	
	Length	1.67
	Width	1.08
	Thickness	1.02
	Cellar N3 Arch 1	
	Length	3.06
	Thickness	0.58
	Cellar N3 Arch 2	
	Length	3.06
	Thickness	0.63
	Cellar N3 Arch 3	
	Length	3.06
	Thickness	0.63
5.	Cellar N4	
	Length	3.86
	Width	3.32
6.	Cellar N5	
	Length	3.90
	Width	3.27
7.	Shop 1	
	Length	4.28
	Width	2.07
8.	Shop 2	
	Length	2.11
	Width	2.07
9.	Shop 3	
	Length	3.62



Sl. No.	Structures/ Areas	Measurements (in Meters)
	Width	3.02
10.	Cellar S1 (Western wall)	
	Entrance 1	
	Length	1.13+
	Width	1.11
	Entrance 2	
	Length	1.13+
	Width	1.11
	Entrance 3	
	Length	1.10+
	Width	1.04
	Entrance 4	
	Length	1.13+
	Width	1.01
	Entrance 5	
	Length	1.13+
	Width	1.26
11.	Cellar S2	
	Length	13.85
	Width	5.69
	Main Entrance to Pillar 1	3.65
	Pillar 1 to Pillar 2	2.55
	Pillar 2 to Pillar 3	2.60
	Pillar 3 to Pillar 4	2.53
	Pillar 4 to Back wall	1.94
	Back wall to Pillar 5	1.55
	Pillar 5 to Pillar 6	2.48
	Pillar 6 to Pillar 7	2.61
	Pillar 7 to Pillar 8	2.53
	Pillar 8 to Main Entrance	3.61
12.	Cellar S3	
	Length	13.85
	Width	3.00
	Entrance Gate 1	
	Length	1.82
	Width	1.12
	Thickness	1.03



Sl.
No.

Structures/ Areas

Measurements
(in Meters)

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Entrance Gate 2

Length

1.79

Width

1.11

Thickness

1.03

Entrance Gate 3

Length

1.80

Width

1.06

Thickness

1.01

Entrance Gate 4

Length

1.83

Width

1.00

Thickness

1.03

Structures of Level 2

13. Platform

East-West

18.76

North-South

39.13

14. East Corridor (North)

Length

13.40

Width

4.11

15. East Corridor (South)

Length

13.40

Width

4.10

16. North Corridor (with room)

Length

7.97

Width

3.20

17. South Corridor (with room)

Length

8.13

Width

3.20

Pillars and Pilasters

18. Pilaster 3 to Pilaster 4

7.06

19. Pilaster 3 to Pillar 1

1.92

20. Pillar 1 to Pillar 2

2.19

21. Pillar 2 to Pilaster 4

1.85

22. Pilaster 5 to Pilaster 6

2.15

23. Pilaster 6 to Pilaster 7

2.30



Sl. No.	Structures/ Areas	Measurements (in Meters)
24.	Pilaster 7 to Pilaster 8	2.15
25.	Pilaster 9 to Pilaster 10	13.40
26.	Wall to Pillar 3	1.99
27.	Pillar 3 to Pillar 4	2.21
28.	Pillar 4 to Pillar 5	2.34
29.	Pillar 5 to Pillar 6	2.24
30.	Pillar 6 to Wall	1.99
31.	Wall to Pillar 7	2.00
32.	Pillar 6 to Pillar 7	13.42
33.	Pillar 7 to Pillar 8	2.21
34.	Pillar 8 to Pillar 9	2.36
35.	Pillar 9 to Pillar 10	2.23
36.	Pillar 10 to Wall	1.98
37.	Pillar 11 to Pillar 12	2.15
38.	Pilaster 11 to Pilaster 12	2.15
39.	Pilaster 12 to Pilaster 13	2.30
40.	Pilaster 13 to Pilaster 14	2.14
41.	Pillar 14 to Wall	1.86
42.	Pillar 16 to Wall	1.34
43.	Pilaster 15 to Pilaster 16	13.40
44.	Pilaster 16 to Pilaster 17	5.85
45.	Pilaster 17 to Pilaster 18	7.29
46.	Central Hall - Entrance Lower Arch Height Width	7.78 4.36
47.	Central Hall - Entrance Upper Arch Height Width	4.88 3.52
48.	Central Hall Length Width	14.78 13.92



Sl. No.	Structures/ Areas	Measurements (in Meters)
49.	North Hall Length Width	7.31 7.28
50.	South Hall Length Width	7.30 7.28
51.	Central Hall - Qibla Frontal Arch Height Width	8.25 4.04
52.	Central Hall - South Arch Height Width	8.26 4.04
53.	Central Hall - North Arch Height Width	8.18 4.04
54.	North Hall - Northern Entrance Length Width	4.46 2.30
55.	North Hall - Eastern Entrance Length Width	4.50 2.29
56.	South Hall - Southern Entrance Length Width	4.50 2.30
57.	South Hall - Eastern Entrance Length Width	4.94 2.37
Western Wall		
58.	Western Wall North to South	38.80
59.	Northwest Side - Entrance Length Width	4.42 2.62
60.	Western Chamber - Eastern Entrance Length Width	3.57 2.26

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Sl. No.	Structures/ Areas	Measurements (in Meters)
61.	Southwest Side - Entrance	
	Length	4.90
	Width	2.62
	Structures at Level 3	
62.	Terrace (North-South)	38.80
63.	Terrace (East-West)	20.45
64.	Central Dome	
	Diameter	10.83
	Thickness of the wall	1.12
65.	North Dome	
	Diameter	9.02
	Thickness of the wall	0.83
66.	South Dome	
	Diameter	9.02
	Thickness of the wall	0.83

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Reply to the Observations of the Court



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Reply to the Observations of the Court

In compliance of the order dated 21.07.2023 of the Hon'ble District Court, Varanasi the Archaeological Survey of India (ASI) carried out scientific investigation/ survey between 24.07.2023 and 02.11.2023 at Settlement Plot No. 9130, Varanasi to comply with the directions (a) to (l) given in the said order.

(A) The Director of ASI is directed to undertake the scientific investigation/ survey/ excavation at the property in question i.e. at Settlement Plot No. 9130 in the case excluding the areas sealed by the Hon'ble Supreme Court vide order dated 17.05.2022, 20.05.2022 as well as vide order dated 11.11.2022 in SLP(C) No.9388/2022 titled as Committee of Management Anjuman Intejamia Masajid Varanasi vs. Rakhi Singh &Ors.;

(ASI) In compliance of the order of Hon'ble Court, the Archaeological Survey of India carried out scientific investigation/ survey at the Settlement Plot No. 9130 excluding the areas sealed by the order of the Hon'ble Supreme Court. Archaeologists, Epigraphists, Chemists, Engineers, Surveyors, Photographers, and other officials of the ASI and the scientists of the National Geophysical Research Institute (NGRI), Hyderabad carried out the investigations and collected data, which was systematically analysed.

Scientific studies were carried out in 2150.5 square meter area, fenced by steel grill around the existing structure. Area outside the fence has been recently developed under Shri Kashi Vishvanath Corridor Project and therefore there was no possibility of finding anything through surface study.

The survey team established a reference point and prepared a plan of the entire complex. Different groups of experts carried out scientific investigation/ survey according to the order of the Hon'ble Court in open area to the east, west, north and south; in cellars below the platform; on the platform, in central, north and south



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halls; in corridors, on roof and under domes except the sealed area. During all these operations it was ensured that no damage is caused to the existing structure.

Representatives of both the parties and administration, besides security personnel on duty, observed all the activities of the survey team and desired co-operation was received from all during the entire operation.

(B) The Director of ASI is also directed to conduct a detailed scientific investigation by using GPR Survey, Excavation, Dating method and other modern techniques of the present structure to find out as to whether same has been constructed over a pre-existing structure of Hindu temple;

(ASI) In compliance of the order of Hon'ble Court, the Archaeological Survey of India carried out investigation to find out the constructional phases of the structure. Based on the studies carried out, observations made on the existing structures, exposed features, and artefacts studied, it can be concluded that there existed a large Hindu temple prior to the construction of the existing structure. This temple had a big central chamber and based on the study of the existing structures and available evidence it can be concluded that it had at least one chamber to the north, south, east and west respectively. Remains of three chambers to the north, south and west can still be seen but the remains of the chamber to the east and any further extension of it cannot be ascertained physically, as the area to the east is covered under solid functional platform with stone flooring.

Entrance to the central chamber of the temple was from the west which has been blocked by stone masonry. Its western chamber was also connected with north and south chambers through a corridor accessible from its north and south entrances respectively. Main entrance to the central chamber was tastefully decorated with carvings of animals and birds and an ornamental *torana*. Figure carved on the *lalatbimba* has been chopped off and most of it is covered with stones, bricks and mortar which is used to block the entrance. Remains of a bird



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figure carved on the door sill, and part of which survived at the northern side, appears to be of a cock.

An inscription kept in the lower room made in south corridor of the existing structure records the construction of the mosque in the 20th regnal year of the Hadrat Alamgir, i.e. Mughal Emperor Aurangzeb (corresponding to A.H. 1087 = 1676-77 CE). The same inscription also records that in the year A.H. 1207 (1792-93 CE) the mosque was repaired with *sahan*, etc.

Comparison of the inscription found in the lower room inside the existing structure, with a copy which was made by the ASI in 1965-66, establishes that attempt was made to erase last two lines of the inscription mentioning about the construction and expansion of the mosque.

In the 17th century, part of the pre-existing structure was modified and reused in the existing structure. Animal figures carved on the pre-existing structure were not suitable for this purpose and therefore they were removed. A part of the pre-existing structure was utilised as the core of the existing structure.

For the enlargement of the mosque and constructing *sahan*, pillared verandah, parts of the pre-existing temple such as pillars, pilasters, etc. were reused with little modifications as per the requirement of the changed use.

During this expansion of the structure a series of cellars were also constructed to the east, north and south to create additional space and to make a large platform in front of the mosque for accommodating large number of people for prayers.

A row of chambers to the east of it was also later merged with the platform by covering and converting the open corridor in cellars with entrances from north and south.



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Based on scientific studies/ survey carried out, study of architectural remains, exposed features and artefacts, inscriptions, art and sculptures, it can be said that there existed a Hindu temple prior to the construction of the existing structure.

(C) The Director of ASI is also directed to conduct scientific investigation in the light of the averment made in this application after associating the Plaintiffs, Defendants and their respective counsels and submit report to this Hon'ble Court upto 04-08-2023 and also to photograph and video-graph the entire survey proceedings;

(ASI) Plaintiffs, defendants and their respective counsels observed the activities of the scientific investigation/ survey team during the entire operation.

The Archaeological Survey of India conducted scientific investigation/ survey according to the directions of the Hon'ble Court. As per the extension of time granted by the Hon'ble Court the work was completed on 02.11.2023 and the report is being submitted within the time granted as per the order dated 11.12.2023. Various activities concerning scientific investigation/ survey were duly photographed and videographed as per the requirement.

(D) The Director of ASI is also directed to investigate the age and nature of construction of the western wall of the building in question through scientific method(s);

(ASI) The western wall, which is made of stones and decorated with mouldings, is remaining part of an earlier Hindu temple. Western wall of the central hall and two halls on its north and south form the western wall of the existing structure. Central chamber attached to the wall still exists unchanged whereas major modifications have been made to both the side chambers. Remains of another chamber which existed towards west are still attached to it with major components preserved on plan and elevation.



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All three halls had an opening towards west through decorated arched entrances. Arched entrances of north and south halls have been blocked and converted into stairs leading to the roof. Stairs made in north side entrance are still in use. Stairs made through the south side entrance have been permanently blocked using stone masonry but one can still enter it from the roof. A large decorated entrance to the central chamber through the western chamber has also been blocked by stone masonry. Remaining parts of all these pre-existing structure collectively form the western wall.

In order to determine age and nature of the western wall the entire structure and open area adjacent to it was examined thoroughly. Soon after the entry in the complex it became clear that large portions of the western wall is covered under heaps of garbage, soil, debris, etc. For studying the features of the western wall and to comply with the orders of Hon'ble Court, removal of the garbage, soil, debris, etc. deposited against it was necessary. As the Hon'ble High Court had directed not to undertake excavation, legal advise was sought from Assistant Solicitor General that whether removal of the garbage dumped above the floor level can be carried out. A meeting was also held with representatives of both the parties in the presence of officials of District Administration where all agreed to remove garbage/ debris by using household/ garden tools. Accordingly, removal of the garbage, soil, debris, etc. was carried out very carefully using domestic and garden tools used for removal of garbage, soil, debris, etc. The garbage, soil, debris, etc. dumped in open area and covering original features of the structures was very carefully removed to the existing floor level. This slow process took lot of time and the same was respectfully informed to the Hon'ble Court while seeking extension of time.

On removal of the garbage, soil, debris, etc. western wall and structures attached to it became visible which were studied and documented systematically. Complying with the order of the Hon'ble High Court, neither digging was done nor the garbage and soil was removed below present floor level which is stone paved



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in different parts of the complex. Hence, features only to the present floor level were studied.

Art and architecture of any building not only indicate its date but also its nature. *Karna-ratha* and *prati-ratha* of central chamber visible on either side of western chamber, a large decorated entrance gateway on the eastern wall of the western chamber, a smaller entrance with destroyed image on *lalatbimba*, birds and animals carved for decoration, suggest that the western wall is remaining part of a pre-existing Hindu temple.

(E) The Director of ASI is also directed to conduct Ground Penetrating Radar (GPR) survey just below the 3 domes of the building in question and conduct excavation, if required;

(ASI) In compliance of the order of Hon'ble Court GPR Survey was conducted under three domes of the existing building by experts from National Geophysical Research Institute (NGRI). The survey of the hall areas covered south corridor, south hall, central hall, east corridor, north hall, and north corridor. Analysis of collected data indicate that - the three-layered stratigraphy is distinctly observed in the north hall and north corridor with >1 m thick Layer-1, which is <0.5 m in central and south halls. The 3-D profile reveals invariably the Layer-1 thickness is higher towards the wall margin as fill material. Layer-2 has a domal shape with a higher heap in the middle and tapering towards margins; a typical geometry of fill material. Layer-3 is a largely undeformed foundation bed. The minarets and foundation walls are rooted in Layer-3.

The basement platform is prominently observed at ~4.5-5 m depth under south and central halls and a feeble signature under north hall. In the north hall, the contact between Layer-1 and Layer-2 has some disturbances. The floor is being frequently repaired, leading to a larger accumulation of mortar bed thickness.



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A small sinkhole-type cavity in the floor of northern hall at 1-2 m depth is observed towards the northern door. A steep and deep narrow cavity is also observed in the north hall adjacent to the central hall passage.

The presence of a rectangular gravel fill passage, akin to a side opening/ door, towards the south, is observed at a depth of ~4-6 m at the basement level in the south corridor. A similar opening at a shallower level down to ~3 m is observed in the north corridor, north of the north hall and west of cellar N5.

(F) The Director of ASI is also directed to conduct Ground Penetrating Radar (GPR) survey beneath the western wall of the building and conduct excavation, if required;

(ASI) In compliance of the order of Hon'ble Court GPR Survey was conducted along the western wall of the existing structure by experts from National Geophysical Research Institute (NGRI). The survey indicated that the western wall area has three platforms adjacent to the individual halls. The northern platform is filled with >2 thick deposit, which was subsequently cleaned for a repeat GPR data generation. Additionally, the platforms on the western wall side are traversed by remnants of walls, whose subsurface extension was imaged.

The platform on the western wall has a three-layered structure but Layer-1 is very thin and occasionally present. The Layer-2 extends down to about ~2.5 m depth underlined by largely un-deformed Layer-3. The walls of the old structures including two arched entrances extend down to >4 m depth and are rooted in Layer-3.

Other marginal walls are extending >4 m depth and are rooted in Layer-3. The tomb-like platform between the central arch is superficial with <0.5 m depth of affected subsoil. The inclined reflectors in Layer-3 are only observed in the profiles extending to the metallic compound wall, suggesting it to be the edge effect.



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(G) The Director of ASI is also directed to conduct Ground Penetrating Radar (GPR) survey beneath the ground of all the cellars and conduct excavation, if required;

(ASI) In compliance of the order of Hon'ble Court, GPR Survey was conducted beneath the ground of cellars at south (S2 and S3) and north (N2, N3, N4 and N5) by experts from National Geophysical Research Institute (NGRI). The survey indicated that the platform area is the roof of cellars, which are filled with Layer-2 debris with ~1 m air column at the top. This suggests a subsequent filling and settlement of Layer-2 debris.

The cellars are of two principal dimensions. The eastern side of the platform has 3-4 cellars (S1, S2, N1, N2) of ~2 m width with variable wall thickness. Two rows of 3-4 m wide cellars (S3, S4, N3 and N4) are observed on the western side of the platform, adjacent to the corridor area. The south cellars (S2) have three 2 m wide and 14 m long corridors, whereas the north cellars (N2 and N3) have four ~2 m wide and ~14 m long corridors.

The eastern part of the south cellar (S1) is 4 m thick where a 2 m wide corridor and well is concealed. The concealed well, within cellar S1 is 2 m wide with an additional ~1 m wide vertical opening towards the southern side. GPR scanning of the walls of the S2 cellar from inside and outside also reveals the existence of the concealed well and corridor in cellar S1.

The base of the south cellars (S2), adjacent to the concealed well (S1), has uneven, reworked, and disturbed soil columns with shallow cavities up to a depth of 3-5 m in the comparable stratigraphy to the Layer-3 level. It acts as a subsurface water flow zone. This suggests the concealed well was functional in the past.

The southwestern side of the platform (adjacent to the corridor area) has several hollow or partially filled 3 m wide cellars with 3 x 3 m size compartments/ rooms separated by ~1 m thick walls (S3 and S4). These larger cellars have opening



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towards the southern wall, which are now sealed, as 1-2 m wide distinct patches are observed in the GPR signals. The complementary larger cellars of identical dimensions are observed towards the northern side (N3 and N4) with some having open functional entrances.

(H) The Director of ASI is also directed to prepare a list of all the artefacts which are found in the building specifying their contents and carry out scientific investigation and undertake dating exercise to find out the age and nature of such artefacts;

(ASI) In compliance of the order of Hon'ble Court, the Archaeological Survey of India conducted scientific investigation/ survey in entire complex and all the objects which were noticed during the investigation were documented and listed. Objects listed during the scientific investigation/ survey include inscriptions, sculptures, coins, pottery, architectural fragment and objects of terracotta, stone, metal and glass. Objects which required first aid treatment were treated at the site and these objects were systematically documented.

In compliance of the order dated 13.09.2023 these objects have been handed over to the district administration on 06.11.2023 for their safe custody.

(I) The Director of ASI is also directed to conduct dating exercise of the pillars and plinth of the building to find out the age and the nature of construction;

(ASI) In compliance of the order of Hon'ble Court, pillars used in existing structure were studied systematically and scientifically. From the minute study of these pillars it is found that pillars with square section having lotus medallion in the centre and flower bud chains on the corners were part of the pre-existing Hindu temple. These pillars and pilasters are reused in existing structure after removing vyala figures and converting that space in floral design. This observation is supported by



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two similar pilasters still existing on the northern and southern wall of the western chamber in their original place. This similarity is established on the basis of scientific study, art and design.

As far as plinth is concerned, it was covered under thick plaster, garbage, soil, debris and later date platforms from all the sides. After removal of garbage, soil, debris, etc. from the western side, a small part of the plinth became visible which was studied systematically. From the scientific investigation/ survey it becomes clear that the area being uneven, height of the plinth would have been different in different directions.

(J) The Director of ASI is also directed to conduct GPR survey, excavation wherever required, dating exercise and other scientific methods for determining the age and nature of construction existing at the site in question;

(ASI) In compliance of the order of Hon'ble Court, the Archaeological Survey of India carried out investigation to find out the constructional phases of the structure. Based on the studies carried out, observations made on the existing structures, exposed features and artefacts studied, it can be concluded that there existed a large Hindu temple prior to construction of the existing structure. This temple had a big central chamber and based on the observations on the existing structures and available evidence it can be concluded that it had at least one chamber to the north, south, east and west. Remains of three chambers to the north, south and west can still be seen but the remains of the chamber to the east and any further extension of it could not be ascertained physically, as the area to the east is covered under solid functional platform with stone flooring.

Entrance to the central chamber of the temple was from the west which has been blocked by stone masonry. Its western chamber was connected with northern and southern chambers also through a corridor accessible from its north and south entrances respectively. Main entrance to the central chamber was tastefully



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decorated with carvings of animals and birds and an ornamental *torana*. Figure carved on the *lalatbimba* has been chopped off and part of it is covered with stones, bricks and mortar which is used to fill the entrance. Remains of a bird figure carved on the door sill, and part of which survived at the northern side, appears to be a cock.

Part of the pre-existing structure was modified and reused in the existing structure in the 17th century. Animal and bird figures not suitable for this purpose were removed, whereas remaining structure was utilised as the core of the existing structure. An inscription kept in lower room inside the existing structure records the construction of the mosque in the 20th regnal year of the Hadrat Alamgir, i.e. Mughal Emperor Aurangzeb in A.H. 1087 (1676-77 CE).

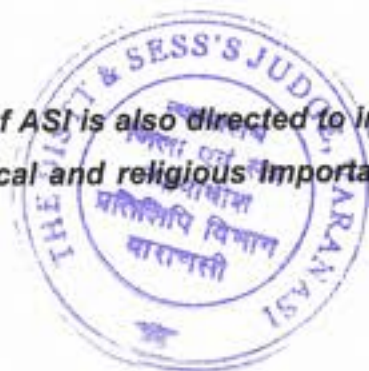
The same inscription also records that in the year A.H. 1207 (1792-93 CE) the mosque was repaired with *sahan*, etc. For the enlargement and constructing *sahan*, parts of the pre-existing temple such as pillars, pilasters, etc. were reused with little modifications as per the requirement of the changed use.

During this expansion of the structure a series of cellars were constructed to the east, north and south for making a large platform in front of the existing structure to accommodate large number of people for prayers.

A row of chambers to the east of it was also later merged with the platform by covering the open corridor by converting this space in cellars approachable from north and south.

Based on scientific studies/ survey carried out, study of architectural remains, exposed features and artefacts, inscriptions, art and sculptures, it can be said that there existed a Hindu temple prior to the construction of the existing structure.

(K) The Director of ASI is also directed to investigate the artefacts and other objects of historical and religious importance existing in different parts of



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the building and also beneath the structure which may be found during such exercise;

(ASI) In compliance of the order of Hon'ble Court, the Archaeological Survey of India conducted scientific investigation/ survey in entire complex and the artefacts which were noticed during the investigation were documented and listed. Objects listed during the scientific investigation/ survey include inscriptions, sculptures, terracotta, stone objects, metal objects, glass objects, coins, pottery and architectural fragments. Fragile or corroded objects, which required first aid treatment were treated at the site and systematically documented.

In compliance of the order dated 13.09.2023 these objects have been handed over to the district administration on 06.11.2023 for their safe custody.

(L) The Director of ASI is also directed to ensure that there should be no damage to the structure standing on the disputed land and it remains intact and unharmed. Report will be submitted up to 04-08-2023. Put up on 04-08-2023 for further proceedings.

(ASI) In compliance of the order of Hon'ble Court, the Archaeological Survey of India insured that during the entire investigation/ survey no damage to the structure standing on the disputed land is caused and it remains intact and unharmed.

Special precautions were taken while working in areas where structure is damaged/ fragile and even while garbage, soil, debris, etc. from open areas was removed small domestic and garden tools were used so that no harm is caused to any existing structure in anyway.

During all these investigations/ survey operations it was ensured that no damage is caused to the existing structure.



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Brief Findings of the Survey



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Brief Findings of the Survey

In compliance of the order of the Hon'ble District Court, Varanasi, dated 21.07.2023 in O.S. 18/2022; affirmed by Hon'ble High Court of Allahabad by order dated 03.08.2023 and Hon'ble Supreme Court of India by order dated 04.08.2023; the Archaeological Survey of India (ASI) carried out scientific investigation/ survey in 2150.5 square meter area fenced with steel grill, in and around the existing structure (excluding the areas sealed by the orders of the Hon'ble Supreme Court), at Settlement Plot No. 9130, Varanasi, from 24.07.2023.

2. All the objects which were noticed during the scientific investigation/ survey in the complex were duly documented. These objects include inscriptions, sculptures, coins, architectural fragments, pottery, and objects of terracotta, stone, metal and glass. Objects which required first aid treatment were treated at the site. In compliance of the order dated 13.09.2023 these objects were handed over to the district administration on 06.11.2023 for their safe custody.

3. Scientific investigations/ survey operations were carried out carefully, ensuring that during all these operations no damage is caused to the existing structure.

GPR Survey

4. GPR Survey in the north hall indicated a small sinkhole-type cavity in the floor at 1-2 m depth towards the northern door, a steep and deep narrow cavity



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adjacent to the central hall passage, and the floor having a larger accumulation of mortar bed thickness.

5. The presence of a rectangular gravel fill passage, akin to a side opening/ door, towards the south, is observed at a depth of ~4-6 m at the basement level in the south corridor. A similar opening at a shallower level down to ~3 m is observed in the north corridor, north of the north hall and west of cellar N5.

6. Rows of 3-4 m wide cellars (S3, S4) are observed adjacent to the corridor area, and a 2 m wide well is concealed in cellar S1.

Pre-existing Structure

7. Based on the scientific studies and observations on -

- Central chamber and main entrance of the pre-existing structure in existing structure
- Western chamber and western wall
- Reuse of pillars and pilasters of pre-existing structure in existing structure
- Inscriptions on the existing structure
- Arabic and Persian inscription on the loose stone
- Sculptural remains in cellars, etc.

it can be said that there existed a large Hindu temple, prior to the construction of the existing structure.



Central Chamber and Main Entrance

8. This temple had a big central chamber and at least one chamber to the north, south, east and west respectively. Remains of three chambers to the north, south and west still exist but the remains of the chamber to the east and any further extension of it could not be ascertained physically, as the area is covered under a platform with stone flooring.

9. Central chamber of the pre-existing structure forms the central hall of the existing structure. This structure with thick and strong walls, along with all architectural components and floral decorations was utilised as the main hall of the mosque. Animal figures carved at the lower ends of decorated arches of the pre-existing structure were mutilated, and inner part of dome is decorated with geometric designs.

10. Main entrance to the central chamber of the temple was from the west which was blocked by stone masonry. This entrance was decorated with carvings of animals and birds and an ornamental *torana*. This large arched gateway had another smaller entrance. Figure carved on the *lalatbimba* of this small entrance has been chopped off. A small part of it is visible as most of it is covered with bricks, stone and mortar which were used to block the entrance.

11. Remains of a bird figure carved on the doorsill appears to be of a cock.



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12. On the other side of the blocked main entrance *quibla* was made. It is simple without any decoration as such and pilasters on either side are also damaged unevenly.

Western Chamber and Western Wall

13. Eastern half of the western chamber still exists whereas the superstructure of western half has been destroyed. This chamber was also connected with north and south chambers through a corridor accessible from its north and south entrances respectively. Remains of this corridor in the northwest side came to light on removal of garbage and debris.

14. The western wall of the existing structure is the remaining part of a pre-existing Hindu temple. This wall, made of stones and decorated with horizontal mouldings, is formed by remaining parts of western chamber, western projections of the central chamber and western walls of the two chambers on its north and south. Central chamber attached to the wall still exists unchanged whereas modifications have been made to both the side chambers.

15. All these chambers had an opening in all the four directions. Decorated arched entrances of central, north and south chambers towards west have been blocked. The arched openings of north and south halls were converted into steps leading to the roof. Steps made in arched entrance of the north hall are still in use. Steps made in arched entrance of the south hall were blocked by stone masonry at some later date, however one can still enter them from the roof. A large decorated



entrance to the central chamber through the western chamber was blocked by stone masonry.

Pillars and Pilasters

16. The pillars and pilasters used in the existing structure were studied systematically and scientifically. For the enlargement of the mosque and constructing *sahan*, parts of the pre-existing temple including pillars and pilasters were reused with little modifications. Minute study of the pillars and pilasters in corridor suggest that they were originally part of the pre-existing Hindu temple. For their reuse in the existing structure, *vyala* figures carved on either side of lotus medallion were mutilated and after removing the stone mass from the corners that space was decorated with floral design. This observation is supported by two similar pilasters still existing on the northern and southern wall of the western chamber in their original place.

Inscriptions

17. During the survey, a number of inscriptions were noticed on the existing and pre-existing structures. A total of 34 inscriptions were recorded during the present survey and 32 estampages were taken. These are, in fact, inscriptions on the stones of the pre-existing Hindu temples, which have been re-used during the construction/ repair of the existing structure. They include inscriptions in Devanagari, Grantha, Telugu and Kannada scripts. Reuse of earlier inscriptions in the structure, suggest that the earlier structures were destroyed and their parts were reused in construction/ repair of the existing structure. Three names of deities such as Janārdhana, Rudra, and Umēśvara are found in these inscriptions. Terms



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such as *Mahā-muktimandapa* mentioned in three inscriptions is of great significance.

Inscription on Loose Stone

18. ASI had in its custody record of an inscription engraved on a loose stone which recorded construction of the mosque in the 20th regnal year of Hadrat Alamgir i.e., Mughal Emperor Aurangzeb corresponding to A.H. 1087 (1676-77 CE). This inscription also recorded that in the year A.H. 1207 (1792-93 CE), the mosque was repaired with *sahan*, etc. The photograph of this stone inscription was recorded in ASI records in the year 1965-66.

19. During the recent survey, this stone with inscription was recovered from a room in the mosque. However, the lines relating to construction of the mosque and its expansion have been scratched out.

20. This is also brought out by the biography of Emperor Aurangzeb, *Maasir-i-Alamgiri*, which mentions that Aurangzeb "issued orders to the governors of all the provinces to demolish the schools and temples of the infidels" (Jadu-Nath Sarkar (tr.) 1947, *Maasir-i-Alamgiri*, pp. 51-52). On 2nd September, 1669 "it was reported that, according to the Emperor's command his officers had demolished the temple of Viswanath at Kashi" (Jadu-Nath Sarkar (tr.) 1947, *Maasir-i-Alamgiri*, p. 55).



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Sculptural Remains in Cellars

21. A series of cellars were also constructed to the east to create additional space and a large platform in front of the mosque for accommodating large number of people for prayers.

22. Pillars from earlier temples were reused while making cellars in eastern part of the platform. A pillar decorated with bells, niches for keeping lamps on all four sides, and bearing an inscription of Sarnvat 1669 (corresponding to 1613 CE, January 1, Friday) is reused in cellar N2.

23. Sculptures of Hindu deities and carved architectural members were found buried under the dumped soil in cellar S2.

Nature and Age

24. Existing architectural remains, decorated mouldings on the walls, *karna-ratha* and *prati-ratha* of central chamber, a large decorated entrance gate with *torana* on the eastern wall of the western chamber, a small entrance with mutilated image on *lalabimba*, birds and animals carved for decoration in and outside suggest that the western wall is remaining part of a Hindu temple. Based on art and architecture, this pre-existing structure can be identified as a Hindu temple.

The Arabic-Persian inscription found inside a room mentions that the mosque was built in the 20th regnal year of Aurangzeb (1676-77 CE). Hence, the pre-existing



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structure appears to have been destroyed in the 17th century, during the reign of Aurangzeb, and part of it was modified and reused in the existing structure.

Based on scientific studies/ survey carried out, study of architectural remains, exposed features and artefacts, inscriptions, art and sculptures, it can be said that there existed a Hindu temple prior to the construction of the existing structure.



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Scientific Investigation/ Survey at Settlement Plot No. 9130, District Varanasi

(Report submitted to the Hon'ble District Court, Varanasi)

Prof. Alok Tripathi

with contributions from

Dr Goutami Bhattacharya, Dr Shubha Majumder, Dr Raj Kumar Patel,
Dr Abinash Mohanty, Dr Izhar Alam Hashmi, Dr Aftab Hussain,
Dr Niraj Kumar Mishra, Dr Vinay Kumar Roy

and inputs from

National Geophysical Research Institute (NGRI), Hyderabad

Archaeological Survey of India
2023



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Scientific Investigation/ Survey at
Settlement Plot No. 9130, District Varanasi

(Report submitted to the Hon'ble District Court, Varanasi)

Volume 2

Scientific Studies

Archaeological Survey of India
2023



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Cleaning Operation and Finds

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In compliance of the order of Hon'ble District Court, Varanasi, the Archaeological Survey of India (ASI) carried out scientific investigations in the Settlement Plot No. 9130 at Varanasi. During the initial survey it was apparent that large quantity of debris had accumulated against the walls, and cellars. The accumulated debris had concealed the architectural features of the western wall and floors all around. Similarly, cellars too were filled up with all kinds of assorted materials that created hindrance.

The entire stretch of land in front of the western wall within the fenced area was overgrown with rank vegetation. It was difficult to observe the surface features. Work on the site was started with removing of the wild vegetation so that the nature of accumulation could be ascertained. After cleaning, brickbats, hardened cement mortar, plastic bags, broken glass and other modern materials were noticed on the surface. It was not a homogeneous deposit rather a heap of discarded things dumped over a period of time. In the southern side, the lower level was completely covered with debris of discarded plastics and assortment of religious paraphernalia that were dumped within the area through the fence grills. Some huge stone blocks could be seen within the accumulation. Almost similar was the nature of the accumulation in the eastern side as well. It also has an open drain from the existing structure which was overflowing. In the northern side, the debris was comparatively lesser than the remaining sides.

For the study of the structure, removal of garbage which was hiding its structural details had to be removed. Through the District Administration it was brought to the notice of both the parties. After a meeting held on 26.08.2023 in the presence of officials of the district administration and lawyers and representatives of both the parties to the case, it was demonstrated that how ASI team proposes to clear the accumulated debris through the use of simple garden and household equipment. It was stressed that debris removal was necessary to reveal the original surface



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features within the fenced area for complying with the Court's directives. It was also reiterated that the removal of the accumulated debris was not going to harm the standing structure in any way. The debris and the retained moisture content in the same was an issue for the GPR survey too.

Western Wall

The nature of the debris in the northwest side and the western chamber area is different than southwest side. The thickness of debris in the southwest side was comparatively less. In fact, this area is in the form of a stone platform where stone blocks have been stacked and joined with lime concrete. Lime concrete deposit on the surface was visible after debris removal. The area between the concrete platform and the grill fence was at a lower level and had haphazardly placed stone blocks of varying sizes along with soil matrix. Cleaning in this area brought to light several architectural fragments, including ornamental brackets. Some stone as well as terracotta objects were also found from the debris. On removal of debris stone paved floor was exposed where the cleaning was stopped.

The western chamber had a thick accumulation of debris on all sides. Only the top of graves was visible. The blocked entrance of the main structure along the western wall was also covered with debris accumulation to considerable height. During the process of removal of debris it became apparent that all sorts of assorted things made up the matrix – plastic wrappers of biscuit and tobacco, footwear and cloth, brickbats, stone chips, potteries, etc. The debris was carefully and gradually removed and architectural details of the buried structures as well as new structural remains were exposed.

During debris clearance good numbers of artefacts and objects were also recovered. One decorated *Yonipatta* of a Shiva *linga* was found in front of the blocked entrance to the central hall. In addition, terracotta figurines of Hanuman, human and animal figurines and other artefacts were also recovered from the debris. An important object retrieved from the debris was a fragmentary kneeling stone elephant, detached from the pre-existing structure. It was found below the southern cusped arch entrance of the western chamber. This sculptural fragment



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was part of the decorative motif of the arch on the entrance. Some important architectural members were also recovered from the western chamber.

Debris in the northwest side was equally varied and was accumulated against the western wall covering its architectural features. The debris included brickbats, broken terracotta tiles, potsherds, lime concrete material, cement mortar, sand bags, plastic bottles, plastic bags, tobacco packets and other various type of modern waste materials. The artefacts recovered from this part include the terracotta figurines, stone sculptural fragments, copper coins of late medieval period, coins of East India Company and the British period and modern Indian coins. A number of architectural members were also exposed during debris cleaning.

Cellars (North and South)

North cellars remain closed under lock and key. Till recently (30 years back), the cellar (N2) was used as a coal shop. The current ground level is black in colour attesting to its use as coal store. N2 also had construction debris like cement concrete mixed with modern bricks. It covered the 1, 2 and 3 entrances of the eastern side wall. Removal of the dumped soil revealed 4 pilasters. In the N3, remains of coal and modern brick mixed with cement mortar were noticed. Debris was also noticed between the 1 and 2 entrances of N3 after cleaning the debris one broken image of *Varaha* was noticed in addition to some architectural members.

In south cellar the ground level of the cellar was not visible due to the presence of all kinds of materials. There were large number of bamboos, damaged wooden door and window frames, iron rods, broken stepped plywood boxes, PVC sheets, metal pipes, iron grill frame and such other modern materials. The eastern, western and northern walls of the cellar had earth filled platforms running all around them. This was again a later addition and there were all kinds of varied material heaped on top of these platforms as well. The entrances of S3 along the west were also full of debris and stone architectural pieces stacked haphazardly within the doorframes.



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Removal of debris from along the western side of S2 exposed several antiquities including sculptures of Vishnu, Shaiva *Dwarpala*, miniature temple, Hanuman and other stone objects as well as terracotta figurines. A number of potteries were found within the soil matrix of the platform. A coin hoard of 64 British India coins was found near the third entrance of the S3. Several pieces of architectural members, brickbats, lakhauri and modern bricks were also found from the cellar S2.

The removal of debris along the west wall of cellar revealed the complete elevation of the entrances to S3. The accumulated debris within the third entrance was also removed including the stacked architectural pieces on top. It revealed that the entire S3 cellar was filled up with debris and soil, large number of bricks as well as brickbats and few intact pots and potsherds.

North Side

Debris removal outside the entrance to the north cellar revealed a paved stone floor. This floor level was cleared of the accumulated debris as far as it could be traced.

East Side

Debris removal was carried out along the east side of the structure and polythene bags, plastic wrappers of biscuits and tobacco, discarded footwear, old clothes and modern bricks were found. Beneath the debris, stone paved flooring, similar to the north side was exposed in the southeast part. The choked and overflowing drain was also cleared off garbage. A few stone architectural members including pillars and pilasters were recovered. One small stone Shiva *linga* was also found during debris cleaning.

South Side

In the south side the accumulated debris was more of garbage of discarded religious paraphernalia that pilgrims have dumped within the area – packets of sweets, plastic containers for offering Ganga water, plastic baskets, flowers, polythene packets, tokens of Annapurna temple, etc. Additionally, plastic water



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bottles, wrappers of snacks, tobacco, footwear, clothing, plywood boards, hardened cement bags, modern bricks, etc. Removal of debris revealed the same stone paved flooring traced on the east and north sides. Stone architectural members like pilasters were retrieved from the debris.

Retrieved Artefacts

As mentioned briefly above, debris clearance led to the recovery of number of artefacts. The recovered objects have been grouped on the basis of their material and the broad categories are objects of stone, terracotta, metal, and glass.

Stone Objects

Stone objects are the largest in number. The stone objects include architectural members, sculptural fragments, pestle, bowl, etc. A large number of architectural members were found from different locations. The architectural members include pilasters of different sizes and styles found from the west wall, cellar N2, east as well as the south sides. Dwarf parapet pillars of varying size with or without finials were another sub-group. Different decorated bracket was also found along with the four decorated *amalaka*. Finials of varying size and styles were another group. Stylistically, they appear to belong to different time-frames. Some heavy stone slabs were retrieved and they bear decoration of trefoil motifs as well as *pandasa* motifs which are also noticed in the existing as well as the pre-existing structures. The *pandasa* motifs were also found used in the cellars. One large stone block, though broken and chopped off, appears to have been part of a *torana*. Some niches with cusped arch decoration were also found during the debris clearance. A *pranala* was also found from the debris of the northwest side.

Apart from architectural members, good numbers of stone sculptural remains were also found from different locations within the fenced area. The sculptural representations of Vishnu, Shaiva *Dwarpala*, Shiva *linga*, *Yonipatta* without Shiva *linga*, Krishna, Ganesh, Hanuman, attendant figures, *vyala*, Nandi, etc. have been identified. Several specimens could not be identified with certainty as they were either too fragmentary like body parts or defaced and worn out. A miniature shrine with sculptural depiction of deities is another noteworthy find. Among the different



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sculptural specimens Shiva *linga* and *Yonipatta* were in good number and mostly found from the cellar S2 and western wall area. Two sculptures of Vishnu were also recorded from cellar S2. Among the two, one is a complete image and another one is only the *parikara* part of an image depicting the figure of seated Vishnu. Two fragmentary images of Krishna were also found from cellar S2. A head of Ganesh made of marble was found from the cellar S2. Two damaged sculptures of Nandi were also found during the debris clearance in the western chamber. One schist stone sculptural fragment of a head of an image was also found from the cellar N3. Lower part of the Varaha image was found from the debris in the cellar N2. In addition, more than 25 different sculptural fragments of different deities were recorded from study area.

Some household items like pestles of different sizes and shapes, mortar, saddle quern, stone bowl and *chakla* were found from the different locations.

Terracotta Objects

Different type of terracotta objects were also found during the survey. These include deities, male and female figures, bricks with dates, tiles, sling balls, etc. Fragmentary figures of Hanuman and Ganesh were found from western wall area. Male and female figures were mainly found from the western wall though some figurines were also found from the cellars N2, S2 and east side.

Potteries

During debris clearance within the area, a good number of potteries of different types were found from the deposit. The large concentration of pottery was from two specific areas – the entire stretch before the western wall from north to south and from southern cellar, more specifically S2 and S3.

Almost the entire repertoire of recovered pottery falls within the general category of common red ware. The major type identified from the group are of miniature pots, *ghara*, *lota*, *chillum*, *hookah* – base and pipe both, spouted pots, *surahis*, V-shaped bowls of various sizes locally known as *parai*, terracotta cups locally known as *purwa*, miniature tumblers, *ghara*, lamps of various size, etc.



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Many of the pots had decorations on their outer surfaces. They generally have a thick micaceous band around the belly of the pot. Other kinds of surface decorations include groups of dots, geometric, floral and sun motifs.

Some of the pots and lamps survive with soot marks which suggest their long-term use.

Bricks

Some complete specimens of Lakhaury bricks/ tiles of different sizes were recorded. Large numbers of such bricks were found from the cellars, more specifically S2 and S3 (max. 16 x 11 x 3 cm and min. 10 x 7.5 x 1.5 cm).

Metal Objects

Some metal objects were found from the different locations in fenced area. Among the metal objects copper objects were dominant. The most common copper objects are coins of varying time periods. In addition, some iron clamps and tools were also found. Among the objects made from metal alloys mention may be made of modern coins and ornaments. Some of the metal objects have been chemically treated – cleaning and preservative coating.

A total of 86 coins of different periods have been documented. Of them, three coins belong to the Shah Alam and these coins have legends in Persian scripts. Numbers of British-India coins were found including a hoard of 64 coins. These include coins belonging to the East India Company, Queen Victoria, Edward VII and George V, some were indecipherable due to surface corrosion and thick incrustation. One copper coin of Madhav Rao Scindhia was also found. Modern Indian currency of varying denominations like 2 paisa, 3 paisa, 5 paisa, 10 paisa and 25 paisa were also documented. One foreign coin of 1 Dirham denomination of United Arab Emirates was also found.



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Glass Objects

Some glass objects, mainly miniature globular pots with elongated neck were found during debris clearance in cellar S2. These were probably used for keeping perfume or carrying water. Fragmentary glass lids were also identified. Some broken piece of glass, probably the part of the bottle, was also found. A single specimen of glazed ware was also recorded.



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Scientific Investigations/ Survey



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Scientific Investigations/ Survey

In compliance with the directives issued by the Hon'ble District Court, Varanasi regarding scientific investigation/ survey at Settlement Plot No. 9130, Varanasi, the Archaeological Survey of India (ASI) carried out scientific investigations and survey of the property. ASI has conducted scientific survey of the aforementioned property, utilizing advanced technologies such as Ground Penetrating Radar (GPR), Differential Global Positioning Systems (DGPS), Total Station Survey, etc. The particulars and specifications of the methodology of scientific studies and the instruments are as follows:

1. Ground Penetrating Radar (GPR)

In the preparation of report, Ground Penetrating Radar (GPR) played a pivotal role as a widely acclaimed geophysical method known for its non-invasive and non-destructive attributes in the realm of archaeological site characterization. With the presence of favourable surface soil and rock conditions, GPR boasts the highest resolution among geophysical techniques, facilitating precise subsurface mapping.

Application of Ground Penetrating Radar (GPR) has proven to be a successful technique in archaeological investigations, specifically for the identification and cartographic representation of buried foundation walls within ancient ruins. They enable meticulous planning of excavation operations, thereby reducing the risk of inadvertent disturbance to ancient buried structures. This knowledge is pivotal for securing excavation clearance and guiding the development of comprehensive archaeological investigation plans.

2. Differential Global Positioning Systems (DGPS)

The DGPS represent an advanced and highly precise satellite-based navigation technology used for determining accurate positions on the Earth's surface. DGPS is an enhanced version of the Global Positioning System (GPS), designed to mitigate the inherent inaccuracies that can affect standard GPS measurements.



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The applications of DGPS are diverse and widespread, contributing to improved safety, efficiency, and precision in numerous fields. Differential Global Positioning Systems (DGPS) find valuable applications in the field of archaeology, enhancing the precision and efficiency of various archaeological endeavours. DGPS technology is employed to accurately map and document archaeological sites, allowing archaeologists to create detailed, high-resolution maps of excavation areas, artefact locations and topographical features. This precision aids in the preservation and analysis of historical sites. DGPS assists archaeologists in heritage management and planning excavation operations with precision. It enables them to mark excavation boundaries and record the exact locations of trenches and test pits, ensuring that they remain within designated archaeological zones.

3. Total Station Survey

The utilization of Total Station Survey in archaeological research is of significant importance as it serves as a highly precise and modern surveying technique. Its widespread adoption is primarily geared towards the meticulous documentation and analysis of historical sites and monuments, thereby furnishing archaeologists with a potent tool for comprehending the spatial and architectural attributes inherent therein. This method is characterized by its remarkable precision, and combines electronic theodolite and electronic distance measuring (EDM) instruments. This amalgamation empowers archaeologists with the means to undertake precise measurements of angles and distances, thereby facilitating the creation of meticulous and accurate maps and plans of archaeological sites. An indispensable facet of Total Station instruments is their ability to record data in three dimensions. This entails the capture of not only horizontal and vertical coordinates but also elevation or height data. This holistic approach is pivotal in comprehending the three-dimensional layout of archaeological sites and monuments. A distinct advantage of Total Station Survey is its non-invasive nature, distinguishing it from some traditional methods that necessitate physical contact with the site. This attribute enhances the preservation of delicate archaeological features.



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4. Handheld XRF

Handheld X-Ray Fluorescence Spectrometer (XRF) is used for non-destructive *in-situ* studies. In order to conduct the *in-situ* as well as non-destructive studies of structural components the hand-held XRF method has been used. It provides the mineral composition of any object.

5. Thermo-hygrometer

The Thermo-hygrometer has been used for recording of humidity and temperature during working hours.

6. Scientific Dating methods

Absolute or scientific dating methods help an archaeologist to find specific date of origin or time ranges in years of an object.

A number of scientific dating methods are used by archaeologists to calculate the age or origin of an artefact and/ or cultural deposits. In these methods the physical properties of any object are measured and then its age is calculated based on these measurements. Samples of datable materials have to be extracted from the object and they are then subjected to further processes where the sample is destroyed to calculate its age. Some of the popular methods are mentioned here.

Radiocarbon Dating (C-14)

One of the most commonly utilised methods of absolute dating is the Radiocarbon dating. The basic principle of this method is to measure the decay of the radioactive isotope of carbon (C-14) in any organic material found from a cultural deposit. The materials that can be dated through C-14 dating method are wood, plants, textiles and human and animal remains. Radiocarbon dating methods cannot be used to date samples that are beyond 75,000 years.

Further refinement has been brought in the field of radiometric dating by the use of AMS or Accelerator Mass Spectrometry. In this method actual C14 atoms are counted rather than counting the disintegration of the radioactive atoms. This allows for smaller sample quantity and more accuracy.



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Thermoluminescence (TL)/ Optically Stimulated Luminescence (OSL)

Dating

Luminescence dating method is useful for determining the age of such inorganic materials like pottery, bricks, etc. which have crystalline minerals. The basic principle in this method is the calculation of the trapped electrons in the crystalline matrix released by natural radiation present in the material. These electrons are released in the form of light emission when thermally or optically stimulated. The nomenclature of the luminescence dating will depend on nature of stimulation – thermal or optical.

In TL dating the sample is heated above a pre-determined critical temperature which causes the release of trapped electrons as light (Thermo Luminescence). The calculation of total light energy released will determine the age passed since last firing – when pottery or brick were manufactured in a kiln. Any material made from soil and heated can be used as sample in this dating method like, terracotta, kilns, furnace, hearths, etc. OSL dating is mainly applied to sediments.

Isotopic Dating

Isotopic dating of mainly rocks – igneous and metamorphic – is based on the principle of decay of unstable isotopes of different elements comprising the rock matrix. The decay rates of the different elements are known and the fact that they have remained stable over geological timescales. The decaying atoms remain trapped in the mineral and rock thereby making it possible to calculate the age. Some of the unstable elements that are found in the rocks are Argon, Potassium, Uranium, Thorium, etc. However, in all these isotopic dating methods the age arrived at will be the geological age of the formation of the rock and not when it changed into an artefact.

Typological Dating

As the name suggests broad time frames for artefacts are fixed based on their stylistic peculiarities. Certain common physical traits are characteristic of particular periods in time. Objects sharing the same characteristics are clubbed together in a group to form a 'Typological classification'. These typological



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groupings can be for smaller portable artefacts as well as for larger things like buildings, etc. Chronological typologies of different objects are based on the diagnostic artefacts that share physical characteristics that were prevalent in particular time frame. These traits will adhere to time frames that may span several centuries but still are fairly conclusive and faithful representatives of respective time periods. Smaller artefacts and even pottery, terracotta objects, stone sculptures, etc. have stylistic features that can be grouped in different chronological typologies. Similar is the case with architectural styles that differed not only with time but also regional peculiarities as well as patronage.



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Scientific Instruments used

1. DGPS

(Brand Name SATLAB, Base Model No. SL900, Rover Model No. EYR,
Controller Model No. SHC 55)

2. Total Station

(Brand Name Topcon, Model No. GM-50 Series)

3. Plane Table-With Slandered Accessories

(Two Sets)

4. Electronic Distometre

5. GPS Map 76CSx and survey equipment

6. Digital Cameras/ Video Cameras

- a. Canon Camera – EOS 5DsR
- b. Canon Camera – EOS 5Ds
- c. Sony HD Handy Cam
- d. Nikon D3500
- e. Sony a7iv
- f. Nikon 27ivDSLR
- g. Nikon Z9
- h. Nikon 810

7. Handheld XRF

8. Thermo-hygrometer



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X-Ray Fluorescence Report



X-Ray Fluorescence Report

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Existing structure has been divided into two major parts for the better understanding of the locations and its portions. The back side exterior wall as western wall and existing structure as 'eastern side'. The structural components considered for non-destructive *in-situ* XRF study are iron dowels/ clamps, stone components, mortars and bricks. In order to conduct the *in-situ* as well as non-destructive study the handheld XRF method has been preferred. For other type of methodological studies either sample is required or the methodology may involve destructive technique.

Dowels/ Clamps

The whole structure has been thoroughly observed for the identification of dowels and its feasibility for study using XRF machine. At the eastern side existing structure is fully covered with white colour enamel paint hence the choices of selection of clamps is very limited. Three clamps were identified on each side for the study based on similar physical condition. In physical observation it is noticed that the exposed clamps are moderately rusted. Where as in western side (western wall) clamps are moderate to highly rusted and surfaces are flaking further dust and dirt also deposited. Western wall and existing structure side stones are pinned with double clamps (one over another), however south side stones are pinned with single clamps. Relevant photographs of sample location along with data and spectra are given in Annexure - 1.

Average iron content, major and minor elements composition are almost similar in western wall and existing structure. Average difference of major elements iron and silica is 1.6. Average iron content is below 90% in south side clamps (average difference is 3.90 - 5.50) and also aluminum detected uniformly in south side samples but not in western wall and existing structure. Presence of lead and zinc in traces is detected in south side but not in western wall and existing structure (Table No. T-3; Graph No. G-2).



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Minor and trace elements (Wt %) is very close to each other on western wall and existing structure except titanium, which is detected in eastern side clamps but not in other sides as the possible cause may be due to the presence of titanium in enamel paint coat (Table No. T-4, T-5; Graph No. G-3, G-4). While the south side data shows deviations from western wall and existing structure.

Iron content is slightly more in clamp/ dowel in existing structure in comparison to western wall, it may be due to exposure of western wall clamps to open atmosphere. Silica content found in western wall is more in comparison to existing structure which may be attributed to deposition of dust and dirt (Table No. T-2; Graph No. G-1).

Titanium content is detected in clamps in existing structure while in western wall only one sample has titanium in traces. The reason for its presence in existing structure may be due to the coatings of white enamel paint which contains about 83% wt% of titanium. Cobalt detected in all three samples of existing structure whereas in western wall only it was detected in one sample (it is to be noted that melting point of cobalt is 1495; iron is 1538).

Based on the above interpretations it seems the dowels of western wall and existing structure are similar in nature and might be prepared by same methodology/ ore. But south side clamps are different in composition from western wall and existing structure. However, it can only be confirmed by other supportive technologies for which the samples have to be collected the process involved may be of destructive nature.

Stone Component

As the existing structure has enamel paint, limitations are involved in selection of stone also. Hence only pillars, beams of floor and northern wall stone portions were selected in existing structure. In western wall pilasters and beam of western chamber were selected for the analysis. These locations were selected for comparing the results of pillars with similar pilasters; beams with beams.



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Relevant photographs of sample location along with data and spectra are given in Annexure - 2.

Major constituting elements wt% variations are very minor which denotes that the both sides stone elemental compositions are almost similar.

Wt% of the most of the constituents are similar except "phosphorus and sulphur" pillars and pilaster stones in western wall and existing structure. Marginally higher content of iron is detected in pillars in existing structure which may be due to slightly reddish tinge of stone. Stones at both the sides are mature in nature due to presence of high silica content (Table No. T-8; Graph No. G-7).

South and north side floor beams in existing structure contain almost similar elemental composition (Table No. T-12; Graph No. G-10).

All the major and minor elements content are almost similar invariably in all the beams (western wall and existing structure) except sulphur content. Higher sulphur content in existing structure may be attributed to various reasons such as enamel paint coat, burning of materials used for rituals etc., (Table No. T-9, T-10; Graph No. G-8, G-9).

Based on the above interpretations it seems that the stone components of western wall and existing structure are similar in nature and might be from same quarry. But in western side pilaster sulphur and phosphorus contents are slightly higher, it may be due to the inherent nature of stone formation or some other reasons that can't be established by this single instrument. In all the beams (western wall and existing structure) all the major and minor elements content are almost similar. The stone used for construction of both sides, western wall and existing structure, are similar in nature i.e., sedimentary rock/ sandstone. However, it can only be confirmed by other supportive technological studies for which the sample have to be collected and the process involved may be destructive in nature.



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Mortar

Existing structure do not have much scope for *in-situ* mortar analysis as it is covered with thick enamel paint layer. However, mortar exposed at some places in corridor and dome portions have been studied. In western wall many places lime mortar is not visible, in few places like western chamber where ever stone is missing, northern portion and pilaster areas mortar was analyzed. Relevant photographs of sample location along with data and spectra are given in Annexure - 3.

Lime mortar in western side pilaster and northern portion of closed door of south hall shows low calcium content with respect to silica content, which is an aberration in case of lime mortar preparation. On visual observation it was noticed that lime mortar in these areas has been used in crude manner and lime and sand ratio was not maintained. Central and northern portions of western wall contain almost similar elemental composition except sulphur. (Table No. T-15, T-16; Graph No. G-13, G-14).

Calcium and sulphur content is higher in south cellar in comparison to north was cellar. It noted that south cellar also had lot of soot deposition. (Table No. T-17, T-18; Graph No. G-15, G-16).

On comparing lime mortar data of western wall (northern and central portion) and dome, it is observed that calcium content is higher in western wall in comparison to dome. Mortar composition of both the domes are similar whereas western wall side mortar is different from the dome in terms of wt% of lime and sand. (Table No. T-19; Graph No. G-17).

Based on the above interpretations it seems that the mortar of both domes is similar in nature and might be prepared in the same methodology. Whereas content composition of western wall side mortar is different from dome portion in terms of wt% of lime and sand. In the case of cellars, south cellar have higher calcium content and sulphur and also soot deposition.



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Bricks

Bricks were used in both the domes of main structure, south and north cellars and in outer ruined structures. The bricks used in both domes and south cellar are dark coloured. Average size of brick is 8 x 5 x 0.5 inch approximately in length, breadth and thickness. Relevant photographs of sample location along with data and spectra are given in Annexure - 4.

Major and minor wt% elemental composition of the bricks in the west side, south and north cellars and domes of main structure are almost similar except very slight higher iron content in north cellar. Outside ruined structure column has higher sulphur content, may be due to various factors like biogenic, open atmosphere, pollutants, raw material, etc., (Table No. T-20; Graph No. G-18).

Dark colour bricks used in south and north domes of main structure and south cellar wall has different wt% of constituent elements (lower silica and higher sulphur content) in comparison to red coloured bricks used in other parts (western portion, north cellar, ruined outer structure) of structure. This difference may be due to different raw materials usage or they made in different place of kiln. (Table No. T-21; Graph No. G-19).

Based on the above interpretations it seems that the brick of both domes and south cellar are similar in nature and might have been prepared in the same kiln/ same source of clay. But the bricks used in western portion, northern cellar, ruined outer structure differ from those of domes and south cellar, so it may from different kiln/ source of clay.





Annexure 1: XRF data analysis of Iron clamps / dowel

SI No. Location of iron/
dowel/ clamp and id
Existing structure,
interior upper niches
17082023-32/33

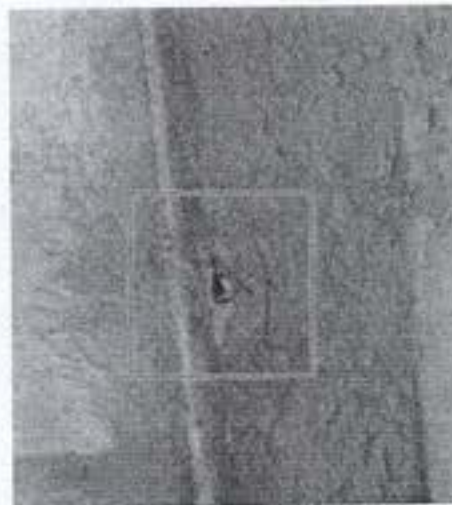


Photograph

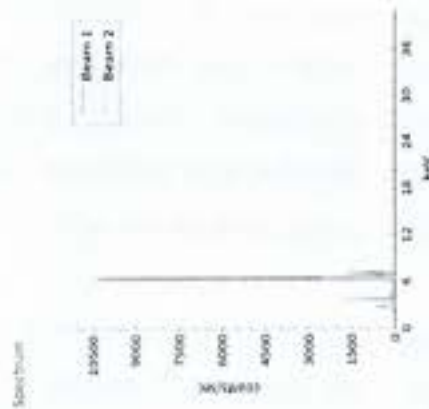
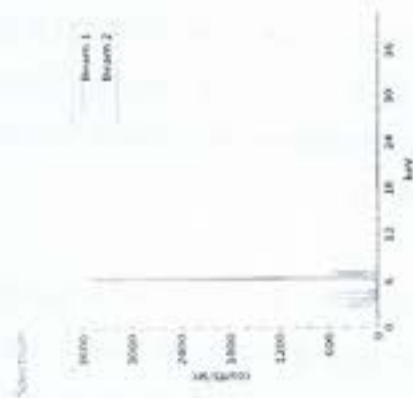
XRF Data

Fe (%)	94.30
Si (%)	3.30
Al (%)	0.00
P (%)	1.20
S (%)	0.20
Co (%)	0.10
Ti (%)	0.60
Zn (%)	0.00
Ni (%)	0.10
Fe (%)	95.60
Si (%)	3.70
Al (%)	0.00
P (%)	0.00
S (%)	0.10
Co (%)	0.10
Ti (%)	0.40
Zn (%)	0.00
Ni (%)	0.00

2. Existing structure,
exterior north facing
wall
17082023-40/41



Spectra





SI Location of iron/
No. dowel/ clamp and id
3. Existing structure,
right to main entrance
18082023-01

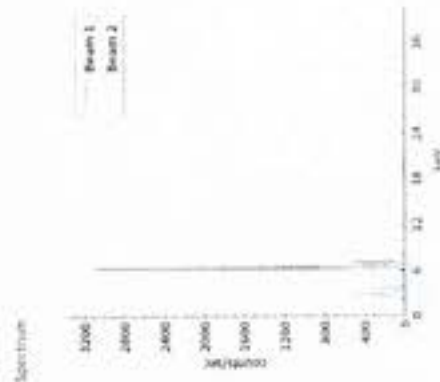
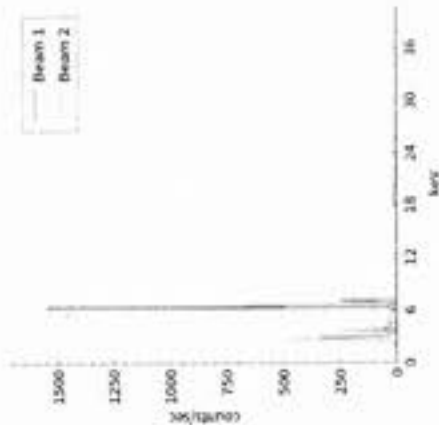
Photograph



XRF Data

Fe (%)	92.40
Si (%)	5.70
Al (%)	0.00
P (%)	1.00
S (%)	0.30
Co (%)	0.40
Ti (%)	0.00
Zn (%)	0.00
Ni (%)	0.10
Fe (%)	91.70
Si (%)	6.90
Al (%)	0.00
P (%)	0.40
S (%)	0.60
Co (%)	0.30
Ti (%)	0.00
Zn (%)	0.00
Ni (%)	0.10

Spectra



4. Western wall,
northwest corner
18082023-26



40438
102



SI No. 5. Location of iron/
dowel/ clamp and id
Western wall,
northwest corner
18082023-31

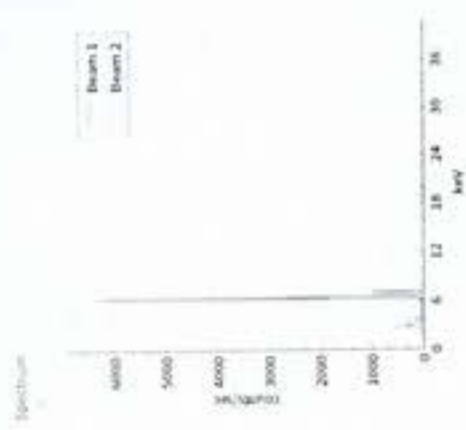
Photograph



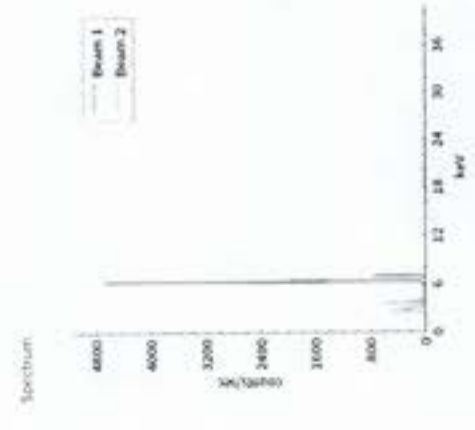
XRF Data

Fe (%)	90.90
Si (%)	6.50
Al (%)	0.00
P (%)	1.60
S (%)	0.40
Co (%)	0.00
Ti (%)	0.10
Zn (%)	0.10
Ni (%)	0.10
Fe (%)	94.90
Si (%)	4.30
Al (%)	0.00
P (%)	0.10
S (%)	0.30
Co (%)	0.00
Ti (%)	0.00
Zn (%)	0.00
Ni (%)	0.06

Spectra

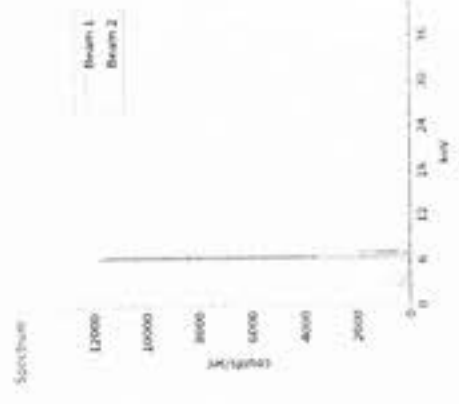
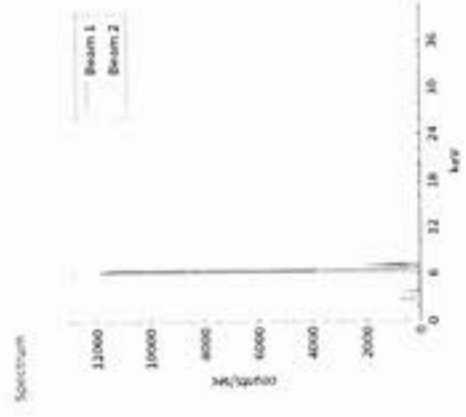


6. Western wall, middle
portion
20082023-28



40432
183

Spectra

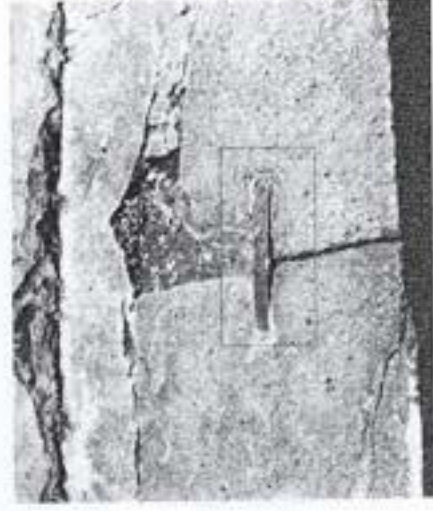


XRF Data

Fe (%)	86.80
Si (%)	8.10
Al (%)	3.20
P (%)	1.40
S (%)	0.00
Co (%)	0.10
Ti (%)	0.00
Zn (%)	0.10
Ni (%)	0.00

Fe (%)	88.80
Si (%)	6.70
Al (%)	2.80
P (%)	0.90
S (%)	0.30
Co (%)	0.10
Ti (%)	0.00
Zn (%)	0.20
Ni (%)	0.00

Photograph



SI Location of iron/
No. dowel/ clamp and id
7. South side, plinth
clamp 4 from west
18082023-40

8. South side, plinth
clamp 7 from west
18082023-41



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104



SI No. 9. Location of iron/
dowel/ clamp and id
South side, plinth
clamp 1 from east
18082023-42

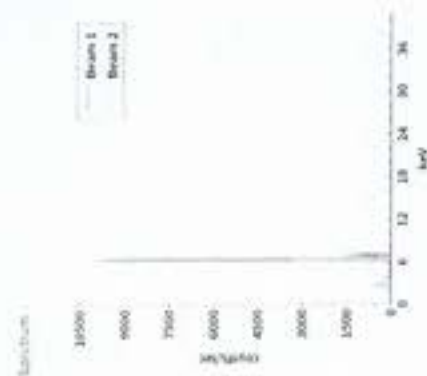
Photograph



XRF Data

Fe (%)	90.2
Si (%)	5.60
Al (%)	2.20
P (%)	0.80
S (%)	0.40
Co (%)	0.00
Ti (%)	0.00
Zn (%)	0.50
Ni (%)	0.00

Spectra



40437
105

Table 1: Iron dowel/ clamp
(Western wall, Existing structure, and South side)

Sl. No.	Location	Fe (%)	Al (%)	P (%)	Si (%)	S (%)	Co (%)	Cu (%)	Pb (%)	Ti (%)	Zn (%)	Mn (%)	Ni (%)
1.	Existing structure, interior upper niches	94.30	0.00	1.20	3.30	0.20	0.10	0.00	0.00	0.60	0.00	0.00	0.10
2.	Existing structure, exterior north facing wall	95.60	0.00	0.00	3.70	0.10	0.10	0.00	0.00	0.40	0.00	0.00	0.00
3.	Existing structure, right to main entrance	92.40	0.00	1.00	5.70	0.30	0.40	0.00	0.00	0.00	0.00	0.00	0.10
	Average	94.10	0.00	0.73	4.23	0.20	0.20	0.00	0.00	0.33	0.00	0.00	0.07
4.	Western wall, northwest corner	91.70	0.00	0.40	6.90	0.60	0.30	0.00	0.00	0.00	0.00	0.00	0.10
5.	Western wall, northwest corner	90.90	0.00	1.60	6.50	0.40	0.00	0.40	0.00	0.05	0.10	0.00	0.10
6.	Western wall, middle portion	94.90	0.00	0.10	4.30	0.30	0.00	0.00	0.00	0.00	0.00	0.07	0.06



40428
106



Sl. No.	Location	Fe (%)	Al (%)	P (%)	Si (%)	S (%)	Co (%)	Cu (%)	Pb (%)	Ti (%)	Zn (%)	Mn (%)	Ni (%)
	Average	92.50	0.00	0.70	5.90	0.43	0.10	0.13	0.00	0.02	0.03	0.02	0.09
7.	South side, plinth clamp 4 from west	86.80	3.20	1.40	8.10	0.00	0.10	0.00	0.00	0.00	0.10	0.00	0.00
8.	South side, plinth clamp 7 from west	88.80	2.80	0.90	6.70	0.30	0.10	0.00	0.10	0.00	0.20	0.00	0.00
9.	South side, plinth clamp 1 from east	90.20	2.20	0.80	5.60	0.40	0.00	0.00	0.20	0.00	0.50	0.00	0.00
	Average	88.60	2.73	1.03	6.80	0.23	0.07	0.00	0.10	0.00	0.27	0.00	0.00

40431
102

Table 2: Average of Iron clamp/ dowels - Iron and Silica
(Western wall, Existing structure, and South side)

Sl. No.	Location	Fe (%)	Si (%)
1.	Existing structure	94.10	4.23
	Average		
2.	Western wall	92.50	5.90
	Average		
3.	South side	88.60	6.80
	Average		



40427
100



Table 3: Iron clamp/ dowel (only minor and trace elements)
(Existing structure, Western wall and South side)

Sl. No.	Location	Al (%)	P (%)	S (%)	Co (%)	Ti (%)	Zn (%)	P (%)	Ni (%)	Pb (%)
1.	Existing structure, interior upper niches	0.0	1.2	0.2	0.1	0.6	0.0	1.2	0.1	0.0
2.	Existing structure, exterior north facing wall	0.0	0.0	0.1	0.1	0.4	0.0	0.0	0.0	0.0
3.	Existing structure, right to main entrance	0.0	1.0	0.3	0.4	0.0	0.0	1.0	0.1	0.0
4.	Western wall, northwest corner	0.0	0.4	0.6	0.3	0.0	0.0	0.4	0.1	0.0
5.	Western wall, northwest corner	0.0	1.6	0.4	0.0	0.1	0.1	1.6	0.1	0.0
6.	Western wall, middle portion	0.0	0.1	0.3	0.0	0.0	0.0	0.1	0.1	0.0
7.	South side, plinth clamp 4 from west	3.2	1.4	0.0	0.1	0.0	0.1	1.4	0.0	0.0
8.	South side, plinth clamp 7 from west	2.8	0.9	0.3	0.1	0.0	0.2	0.9	0.0	0.1
9.	South side, plinth clamp 1 from east	2.2	0.8	0.4	0.0	0.0	0.5	0.8	0.0	0.2

40401
189

Table 4: Average of Iron clamp/ dowels (except Fe, Si, Mn)
(Western wall, Existing structure, and South side)

Sl. No.	Location	P (%)	Al (%)	S (%)	Co (%)	Cu (%)	Pb (%)	Ti (%)	Zn (%)	Mn (%)	Ni (%)
1.	Existing structure, Average	0.73	0.00	0.20	0.20	0.00	0.00	0.33	0.00	0.00	0.07
2.	Western wall, Average	0.70	0.00	0.43	0.10	0.00	0.00	0.02	0.03	0.02	0.09
3.	South side, Average	1.03	2.73	0.23	0.07	0.00	0.10	0.00	0.27	0.00	0.00



40427
190



Table 5: Iron clamp/ dowel
(Existing structure and Western wall)

Sl. No.	Location	Co (%)	S (%)	Ni (%)	Ti (%)	Si (%)	Fe (%)	P (%)
1.	Existing structure, interior upper niches	0.10	0.20	0.10	0.60	3.30	94.30	1.20
2.	Existing structure, exterior north facing wall	0.10	0.10	0.00	0.40	3.70	95.60	0.00
3.	Existing structure, right to main entrance	0.40	0.30	0.10	0.00	5.70	92.40	1.00
4.	Western wall, northwest corner	0.30	0.60	0.10	0.00	6.90	91.70	0.40
5.	Western wall, northwest corner	0.00	0.40	0.10	0.10	6.50	90.90	1.60
6.	Western wall, middle portion	0.00	0.30	0.06	0.00	4.30	94.90	0.10

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191
30

Table 6: Iron clamp/ dowel
(Western wall, Existing structure, and South side)

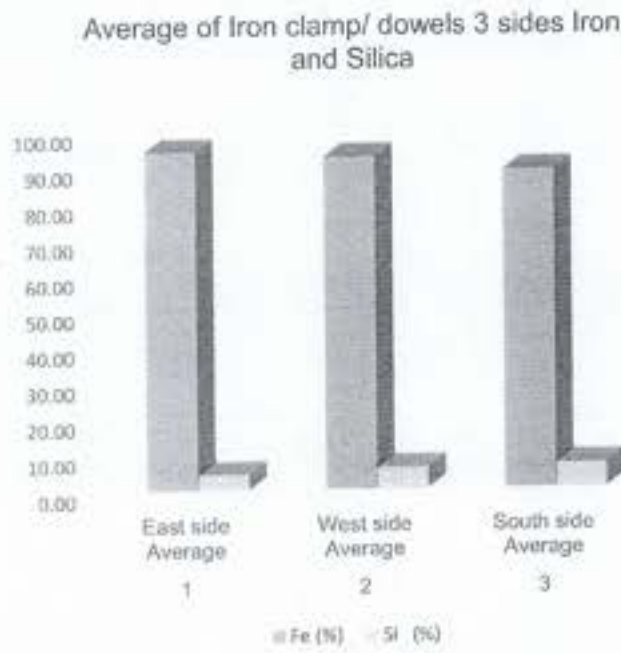
Sl. No.	Location	P (%)	Si (%)	S (%)	Co (%)	Ti (%)	Ni (%)
1.	Existing structure, interior upper niches	1.2	3.3	0.2	0.1	0.6	0.1
2.	Existing structure, exterior north facing wall	0.0	3.7	0.1	0.1	0.4	0.0
3.	Existing structure, right to main entrance	1.0	5.7	0.3	0.4	0.0	0.1
4.	Western wall, northwest corner	0.4	6.9	0.6	0.3	0.0	0.1
5.	Western wall, northwest corner	1.6	6.5	0.4	0.0	0.1	0.1
6.	Western wall, middle portion	0.1	4.3	0.3	0.0	0.0	0.1
7.	South side, plinth clamp 4 from west	1.4	8.1	0.0	0.1	0.0	0.0
8.	South side, plinth clamp 7 from west	0.9	6.7	0.3	0.1	0.0	0.0
	South side, plinth clamp 1 from east	0.8	5.6	0.4	0.0	0.0	0.0



40437
192

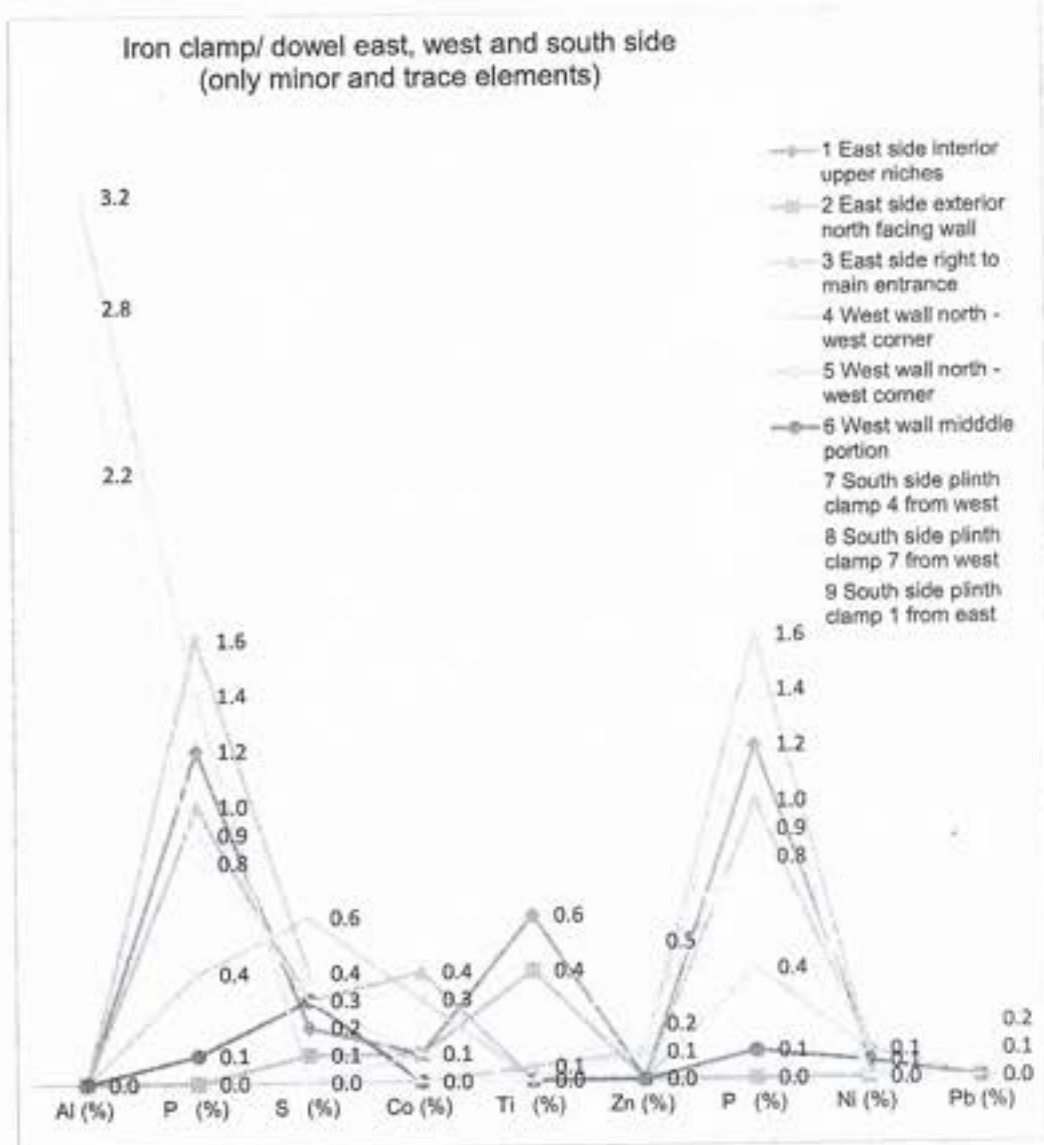
410421
193

Graph 1: Average of Iron clamp/ dowels 3 sides Iron and Silica



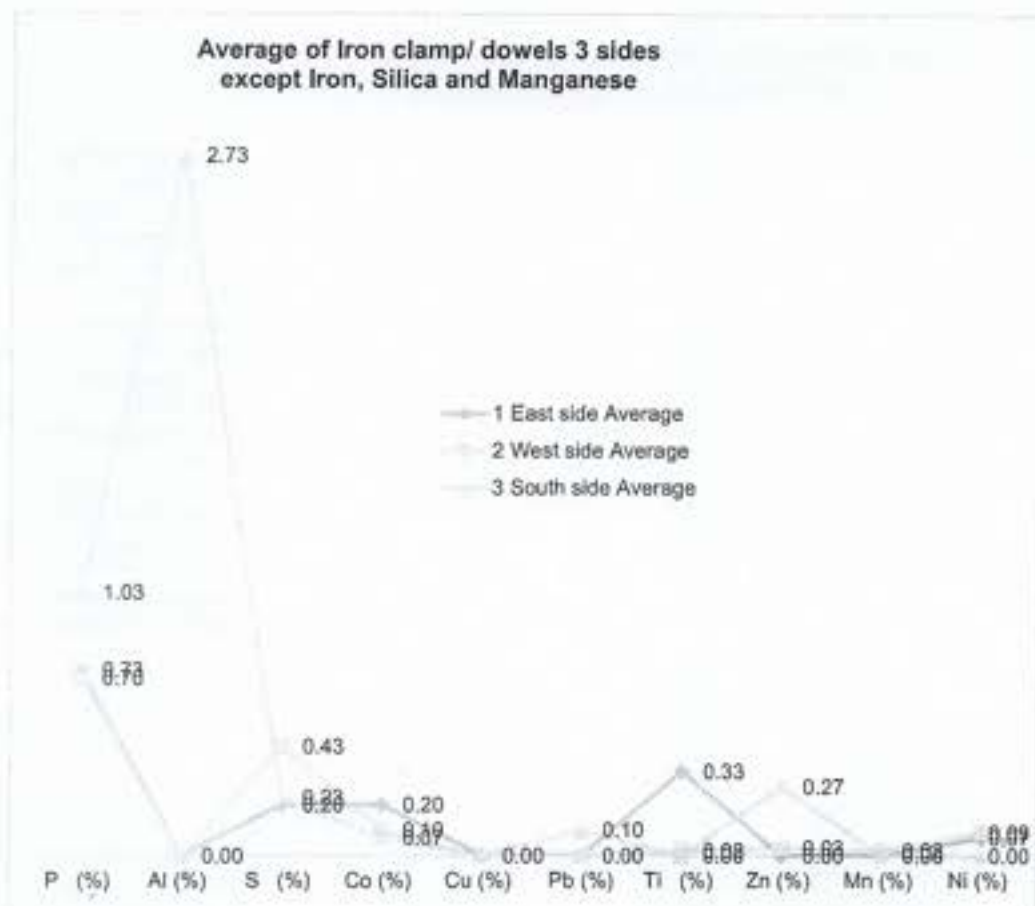
40438
194

**Graph 2: Iron clamp/ dowel western wall, existing structure and south side
(only minor and trace elements)**



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75

Graph 3: Average of Iron clamp/ dowels 3 sides
except Iron, Silica and Manganese

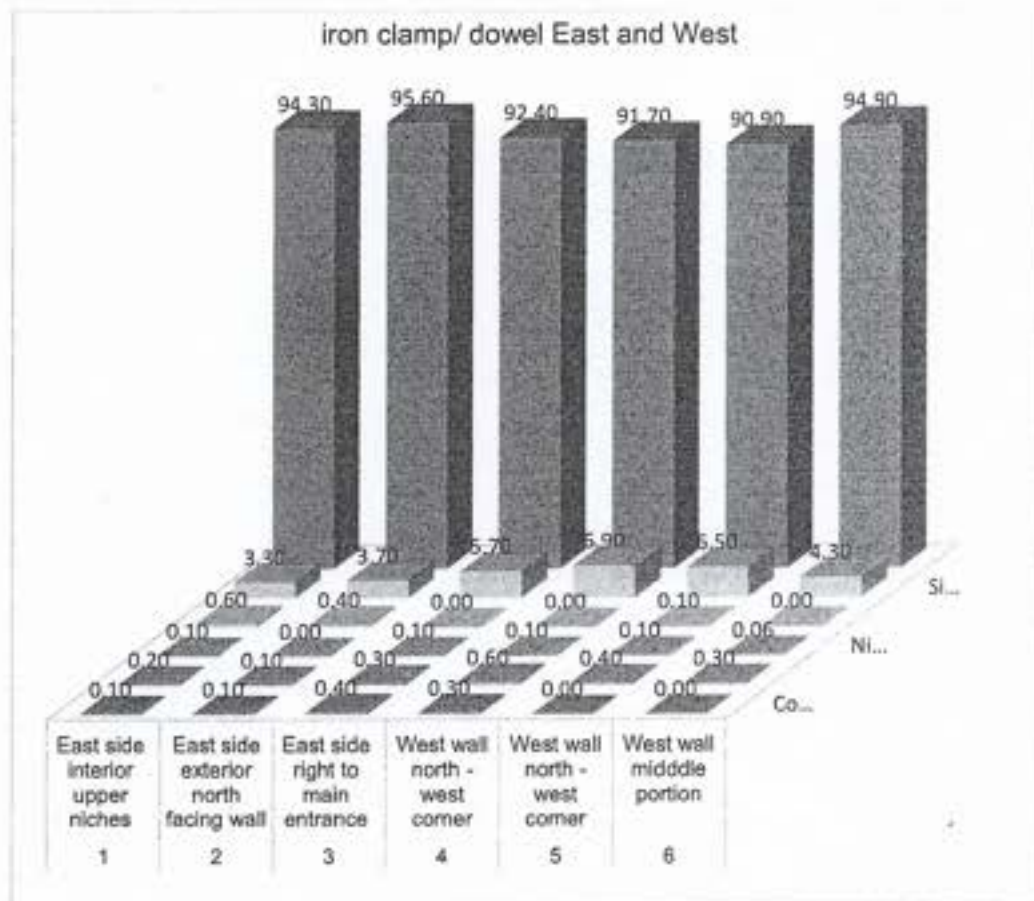


Minor and trace elements (Wt%) is very close to each other western wall and existing structure except Titanium, which is detected in clamps in existing structure but not in other sides as the possible cause cited above. While the south side data shows deviations from other two sides.



40.457
196

Graph 4: Iron clamp/ dowels western wall and existing structure

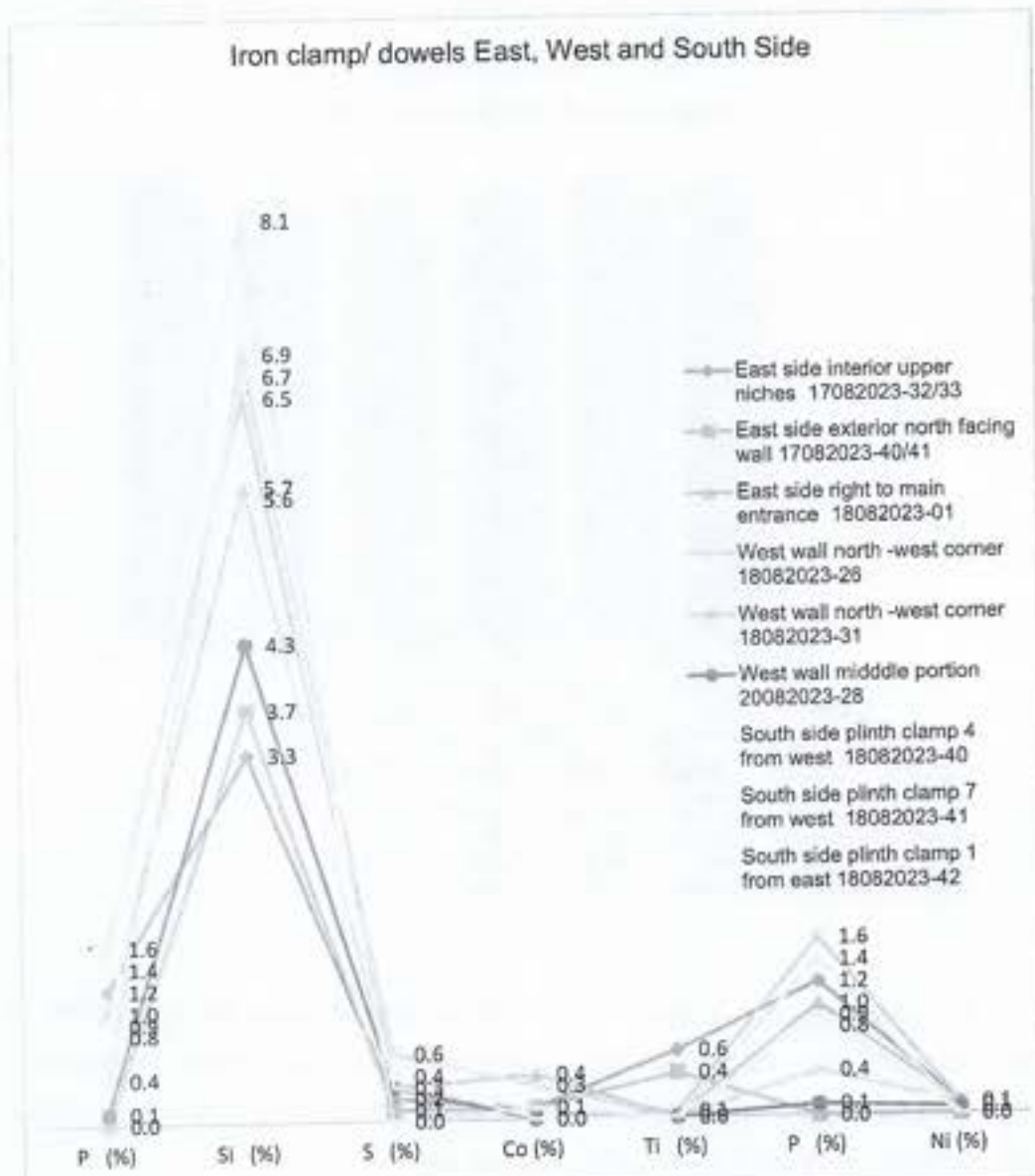


- * Iron content is more in clamp/ dowel in existing structure in comparison to western wall, it may be due to exposure of west side clamps to open atmosphere
- * Silica content are more found in western wall in comparison to existing structure which may be attributed to deposition of dust and dirt
- * Titanium content is detected in clamps in existing structure while in western wall only one sample has titanium in traces. The reason for the presence in existing structure may be due to the coatings of white enamel paint which contains about 83% titanium
- * Cobalt detected in all three samples from existing structure where as in western wall only it was deducted in one sample (it is to be noted that melting point of Cobalt is 1495, and of Iron is 1538)

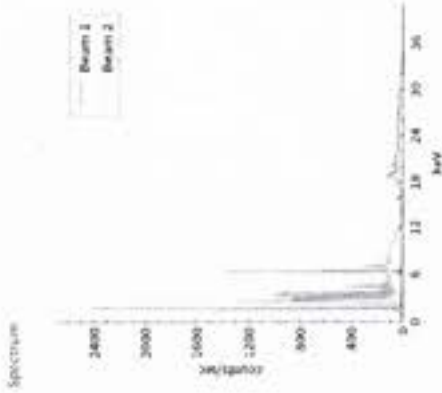
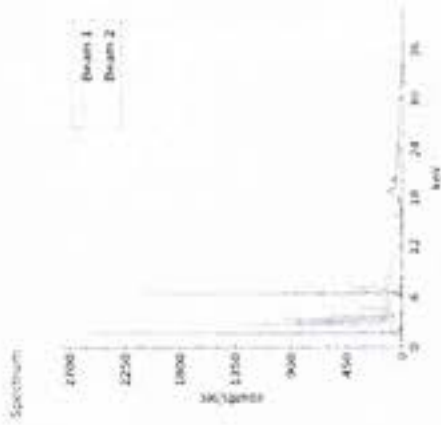


404217
192

Graph 5: Iron clamp/ dowels East, West and South Side



Annexure 2: XRF data analysis of pilaster stone of Western wall and pillars of Existing structure

Sl No.	Location of Stone sample and id	Photograph	XRF Data	Spectra
1.	Existing structure, exterior pillar 1 18082023-02		Si (%) 83.2 Al (%) 9.4 Fe (%) 3.8 Sc (%) 0.5 P (%) 0.4 S (%) 1.4 Ti (%) 0.7 Mn (%) 0.1 Zr (%) 0.1	
2.	Existing structure, exterior pillar 3 18082023-04		Si (%) 83.2 Al (%) 10.9 Fe (%) 3.2 Sc (%) 0.4 P (%) 0.6 S (%) 0.4 Ti (%) 0.8 Mn (%) 0.0 Zr (%) 0.1	



40428
198



SI No. Location of Stone sample and id
Existing structure, eastern pillar 4
18082023-06

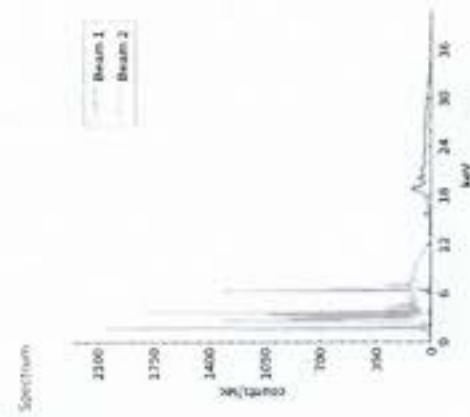
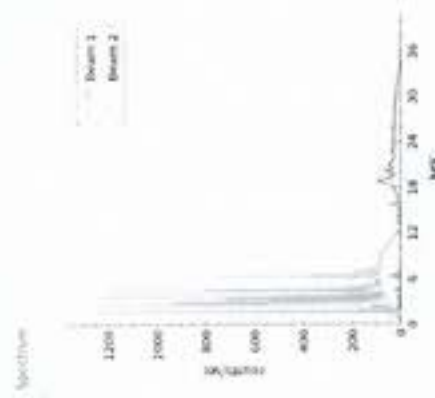
Photograph



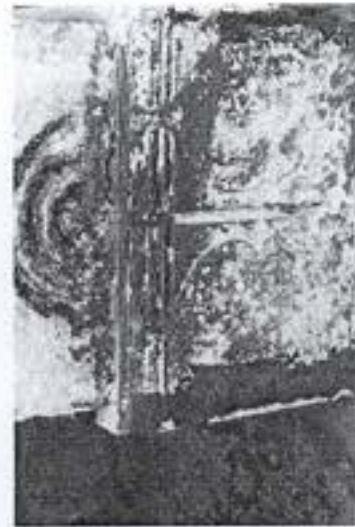
XRF Data

Si (%)	81.3
Al (%)	9.4
Fe (%)	2.7
Sc (%)	1.0
P (%)	0.6
S (%)	2.2
Ti (%)	2.7
Mn (%)	0.1
Zr (%)	0.1
Si (%)	87.8
Al (%)	7.5
Fe (%)	2.0
Sc (%)	0.7
P (%)	0.8
S (%)	0.5
Ti (%)	0.6
Mn (%)	0.0
Zr (%)	0.0

Spectra

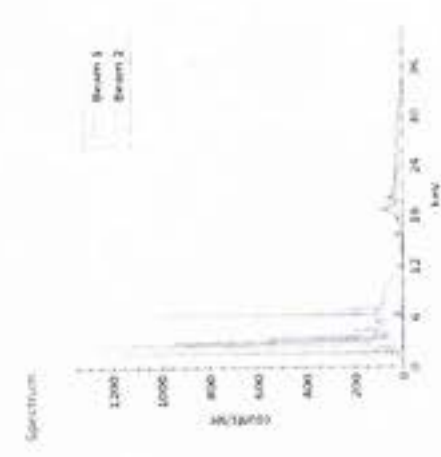
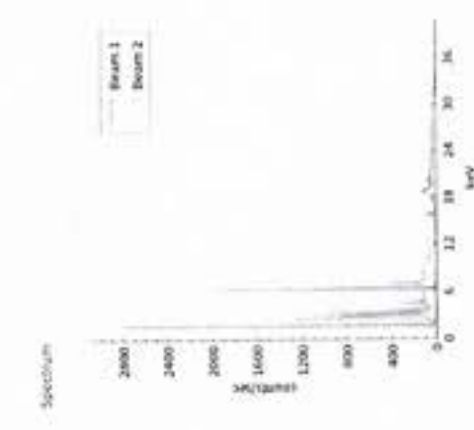


4. Existing structure, exterior pillar 6
18082023-09



40428
199

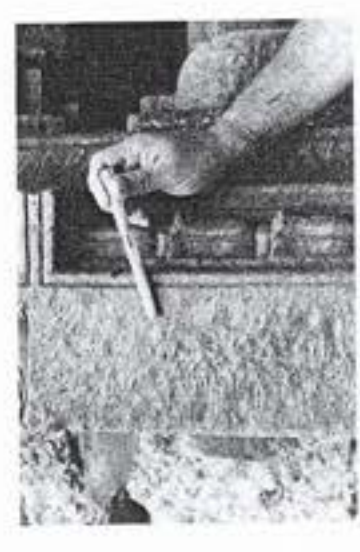
Spectra



XRF Data

Si (%)	85.4
Al (%)	7.9
Fe (%)	2.2
Sc (%)	0.3
P (%)	0.3
S (%)	1.5
Ti (%)	0.5
Mn (%)	0.0
Zr (%)	0.1
Si (%)	82.6
Al (%)	9.9
Fe (%)	1.6
Sc (%)	0.6
P (%)	1.4
S (%)	3.5
Ti (%)	0.5
Mn (%)	0.0
Zr (%)	0.1

Photograph



SI Location of Stone
No. sample and id
5. Existing structure,
exterior pillar 7
18082023-12

6. Western wall, pilaster
south facing

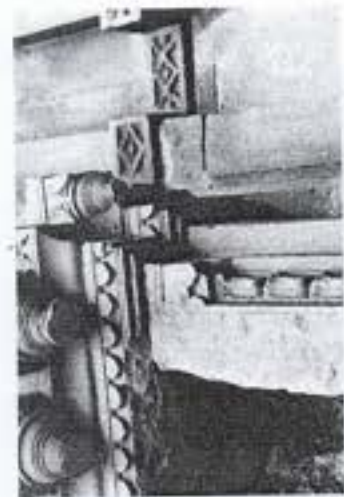


40457
200



SI Location of Stone
No. sample and id
7. Western wall, pilaster
 south facing
 17082023-53

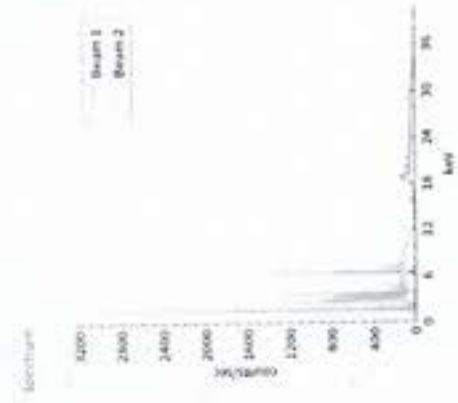
Photograph



XRF Data

Si (%)	82.5
Al (%)	8.6
Fe (%)	1.6
Sc (%)	0.8
P (%)	3.8
S (%)	2.1
Ti (%)	0.5
Mn (%)	0.0
Zr (%)	0.0

Spectra



40437
201

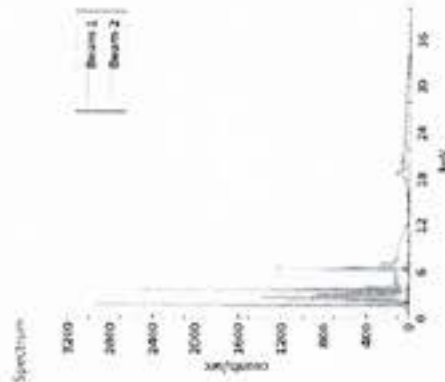
XRF data analysis of stone wall

SI Location of Stone
No. sample and id
1. Existing structure,
interior north wall
western beam
17082023-55

Photograph

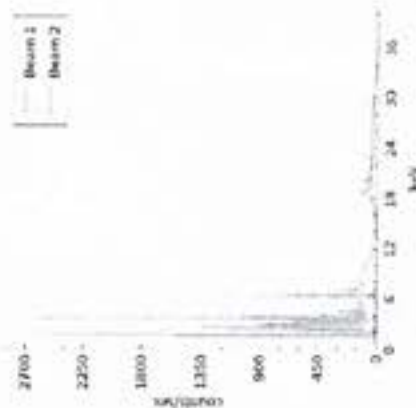
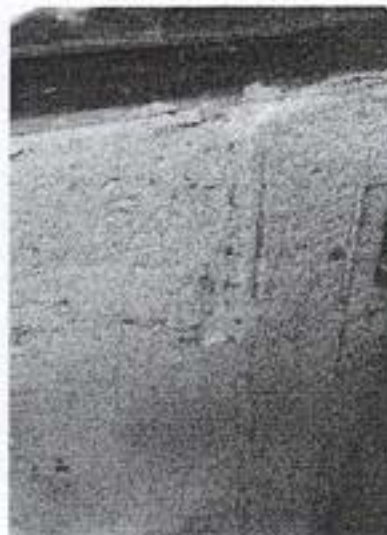


Spectra



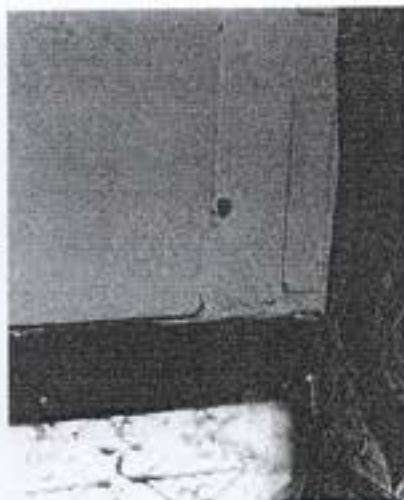
Zr (%) 0
Al (%) 3.3
Fe (%) 1.4
Sc (%) 0.8
Si (%) 71.4
P (%) 0
S (%) 22.8
Ti (%) 0.1
Mn (%) 0
Pb (%) 0
Zr (%) 0
Al (%) 3.2
Fe (%) 1.6
Sc (%) 1.0
Si (%) 69.6
P (%) 0
S (%) 24.4
Ti (%) 0.2
Mn (%) 0
Pb (%) 0

2. Existing structure,
interior north wall
western beam
17082023-57



Sl No. Location of Stone sample and id
3. Existing structure, interior north wall eastern beam 17082023-58

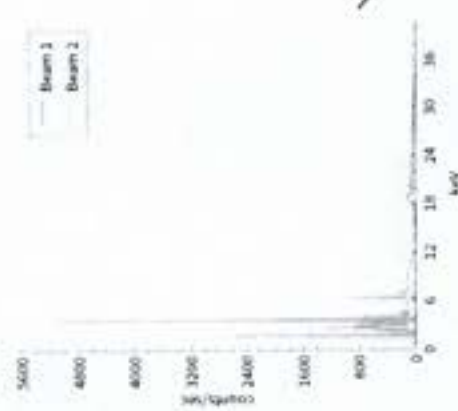
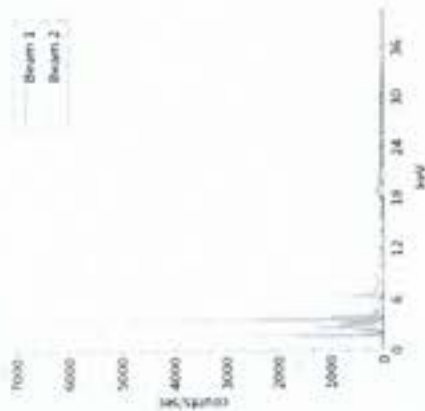
Photograph



XRF Data

Zr (%) 0
Al (%) 4.0
Fe (%) 1.0
Sc (%) 2.8
Si (%) 79.1
P (%) 0
S (%) 12.8
Ti (%) 0.2
Mn (%) 0
Pb (%) 0
Zr (%) 0
Al (%) 4.2
Fe (%) 1.1
Sc (%) 2.2
Si (%) 77.7
P (%) 0
S (%) 14.5
Ti (%) 0.3
Mn (%) 0
Pb (%) 0

Spectra



4. Existing structure, interior north wall eastern beam 17082023-59



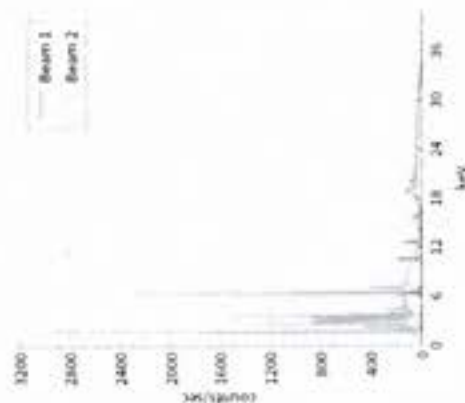
404.57
203

SI Location of Stone
No. sample and id
5. Western wall, middle
portion beam at top
18082023-39

Photograph



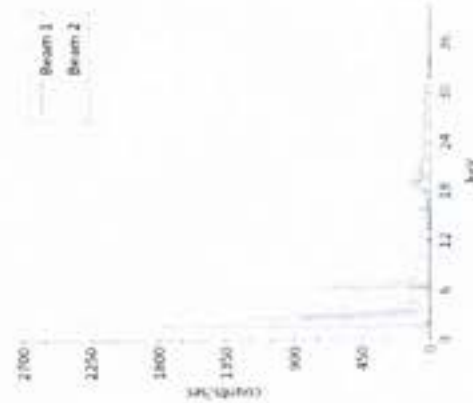
Spectra



XRF Data

Zr (%)	0.1
Al (%)	6.7
Fe (%)	5.2
Sc (%)	0.6
Si (%)	79.3
P (%)	6.0
S (%)	0
Ti (%)	0.9
Mn (%)	0.2
Pb (%)	1.0

6. Western wall, middle
portion beam at top
20082023-25



Zr (%)	0.1
Al (%)	5.9
Fe (%)	4.4
Sc (%)	0.3
Si (%)	86.5
P (%)	1.1
S (%)	0.7
Ti (%)	0.9
Mn (%)	0.1
Pb (%)	0.1



40437
204



SI No. 7. Location of Stone sample and id Western wall, middle portion beam at top 20082023-26

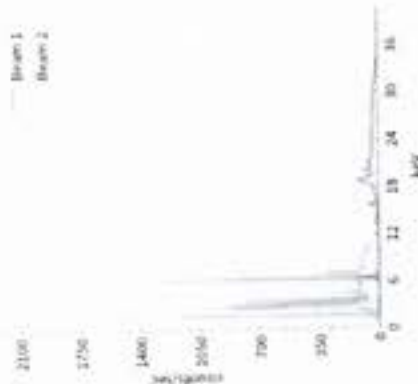
Photograph



XRF Data

Zr (%)	0.1
Al (%)	8.8
Fe (%)	5.1
Sc (%)	0.5
Si (%)	80.6
P (%)	1.6
S (%)	2.3
Ti (%)	0.8
Mn (%)	0.1
Pb (%)	0.1

Spectra

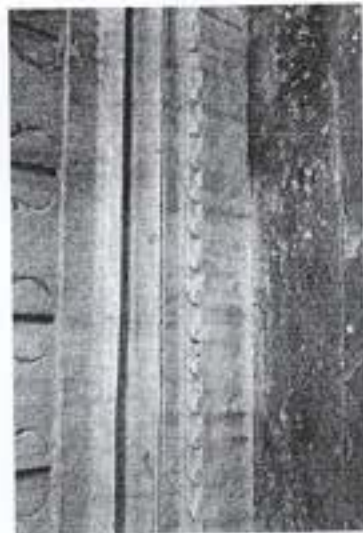


404351
225
44

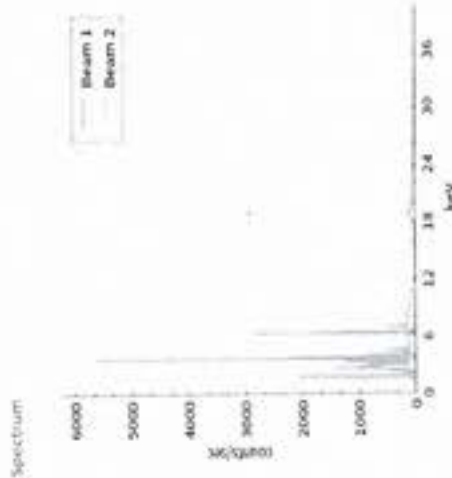
XRF data analysis of stone beams

SI No. 1. Location of Stone sample and id
Existing structure, interior floor beam south
Average
17082023-4,8,16 & 17

Photograph

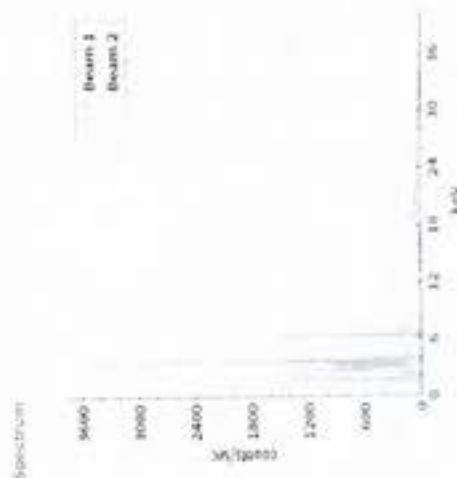
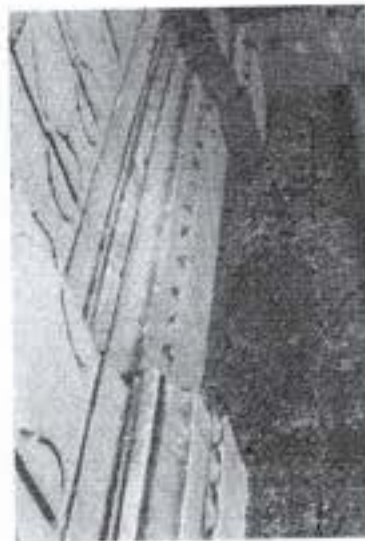


Spectra



Si (%)	71
Al (%)	10
Fe (%)	4.4
Sc (%)	2
P (%)	1.5
S (%)	9.2
Ti (%)	1.5
Zn (%)	0.1
Mn (%)	0.1
Zr (%)	0.4

2. Existing structure, interior floor beam north
Average
17082023-18,19 & 23-26



Si (%)	73
Al (%)	9.2
Fe (%)	3.6
Sc (%)	2.7
P (%)	2.4
S (%)	8.1
Ti (%)	0.6
Zn (%)	0.1
Mn (%)	0.1
Zr (%)	0.1



40438
206



Table 7: XRF data analysis of stone - pilaster of Western wall and pillars of Existing structure

Sl. No.	Location	Al (%)	Si (%)	Fe (%)	Sc (%)	P (%)	S (%)	Ti (%)	Mn (%)	Zr (%)
1.	Existing structure, exterior pillar 1	9.4	83.2	3.8	0.5	0.4	1.4	0.7	0.1	0.1
2.	Existing structure, exterior pillar 3	10.9	83.2	3.2	0.4	0.6	0.4	0.8	0.0	0.1
3.	Existing structure, exterior pillar 4	9.4	81.3	2.7	1.0	0.6	2.2	2.7	0.1	0.1
4.	Existing structure, exterior pillar 6	7.5	87.8	2.0	0.7	0.8	0.5	0.6	0.0	0.0
5.	Existing structure, exterior pillar 7	7.9	85.4	2.2	0.3	0.3	1.5	0.5	0.0	0.1
6.	Western wall, pilaster south facing	9.9	82.6	1.6	0.6	1.4	3.5	0.5	0.0	0.1
7.	Western wall, pilaster north facing	8.6	82.5	1.6	0.8	3.8	2.1	0.5	0.0	0.0

40431
202

Table 8: XRF data analysis of pilaster stone of Western wall and pillars of Existing structure

Sl. No.	Location	Si (%)	Al (%)	Fe (%)
1.	Existing structure, exterior pillar 1	83.2	9.4	3.8
2.	Existing structure, exterior pillar 3	83.2	10.9	3.2
3.	Existing structure, exterior pillar 4	81.3	9.4	2.7
4.	Existing structure, exterior pillar 6	87.8	7.5	2.0
5.	Existing structure, exterior pillar 7	85.4	7.9	2.2
6.	Western wall, pilaster south facing	82.6	9.9	1.6
7.	Western wall, pilaster south facing	82.5	8.6	1.6



40418
208



Table 9: XRF data of beam stone of existing structure (interior north wall) and beam of western wall at top facing south

Sl. No.	Location	Zr (%)	Al (%)	Fe (%)	Sc (%)	Si (%)	P (%)	S (%)	Ti (%)	Mn (%)	Pb (%)
1.	Existing structure, interior north wall western beam	0.0	3.3	1.4	0.8	71.4	0	22.8	0.1	0	0
2.	Existing structure, interior north wall western beam	0.0	3.2	1.6	1.0	69.6	0.0	24.4	0.2	0.0	0.0
3.	Existing structure, interior north wall eastern beam	0.0	4.0	1.0	2.8	79.1	0.0	12.8	0.2	0.0	0.0
4.	Existing structure, interior north wall eastern beam	0.0	4.2	1.1	2.2	77.7	0.0	14.5	0.3	0.0	0.0
5.	Western wall, middle portion beam at top	0.1	6.7	5.2	0.6	79.3	6.0	0.0	0.9	0.2	1.0
6.	Western wall, middle portion beam at top	0.1	5.9	4.4	0.3	86.5	1.1	0.7	0.9	0.1	0.1
7.	Western wall, middle portion beam at top	0.1	8.8	5.1	0.5	80.6	1.6	2.3	0.8	0.1	0.1

40457
209

Table 10: XRF data of beam stone
of existing structure, (interior north wall) and beam of western wall at top facing south (except silica)

Sl. No.	Location	Zr (%)	Al (%)	Fe (%)	Sc (%)	P (%)	S (%)	Ti (%)	Mn (%)	Pb (%)
1.	Existing structure, interior north wall western beam	0.0	3.3	1.4	0.8	0.0	22.8	0.1	0.0	0.0
2.	Existing structure, interior north wall western beam	0.0	3.2	1.6	1.0	0.0	24.4	0.2	0.0	0.0
3.	Existing structure, interior north wall eastern beam	0.0	4.0	1.0	2.8	0.0	12.8	0.2	0.0	0.0
4.	Existing structure, interior north wall eastern beam	0.0	4.2	1.1	2.2	0.0	14.5	0.3	0.0	0.0
5.	Western wall, middle portion beam at top	0.1	6.7	5.2	0.6	6.0	0.0	0.9	0.2	1.0
6.	Western wall, middle portion beam at top	0.1	5.9	4.4	0.3	1.1	0.7	0.9	0.1	0.1
7.	Western wall, middle portion beam at top	0.1	8.8	5.1	0.5	1.6	2.3	0.8	0.1	0.1



40438
210



Table 11: XRF analysis data of stone beam in floor of central hall

Sl. No.	Location	Si (%)	Al (%)	Fe (%)	Sc (%)	P (%)	S (%)	Ti (%)	Zn (%)	Mn (%)	Zr (%)
1.	Existing structure, interior floor beam south	69.2	8.7	3.9	0.6	0.2	16.7	0.6	0.0	0.0	0.1
2.	Existing structure, interior floor beam south	69.2	10.6	3.5	2.3	2.9	10.4	0.7	0.1	0.0	0.0
3.	Existing structure, interior floor beam south	68.8	10.3	6.5	2.9	1.4	4.3	4.1	0.2	0.1	1.2
4.	Existing structure, interior floor beam south	75	12	3.5	2.0	1.3	5.5	0.5	0.1	0.1	0.1
5.	Existing structure, interior floor beam south	70.6	10.4	4.35	1.95	1.45	9.23	1.48	0.1	0.05	0.35
	Average										
6.	Existing structure, interior floor beam north	73	8.9	2.7	2.4	4.8	7.7	0.4	0.0	0.1	0.1
7.	Existing structure, interior floor beam north	72.1	10.7	4.8	3.4	2.3	5.7	0.8	0.0	0.1	0.1
8.	Existing structure, interior floor beam north	73.4	9.2	4.5	3.6	1.9	6.2	0.6	0.2	0.2	0.1
9.	Existing structure, interior floor beam north	74	7.9	2.4	1.5	0.7	12.8	0.5	0.0	0.0	0.1
10.	Existing structure, interior floor beam north	73.1	9.18	3.6	2.73	2.43	8.1	0.58	0.05	0.1	0.1
	Average										

42421
211
50

Table 12: Existing structure, interior floor beams

Sl. No.	Location	Si (%)	Al (%)	Fe (%)	Sc (%)	P (%)	S (%)	Ti (%)	Zn (%)	Mn (%)	Zr (%)
1.	South side Average	71	10	4.4	2.0	1.5	9.2	1.5	0.1	0.1	0.4
2.	North side Average	73	9.2	3.6	2.7	2.4	8.1	0.6	0.1	0.1	0.1



40437
212



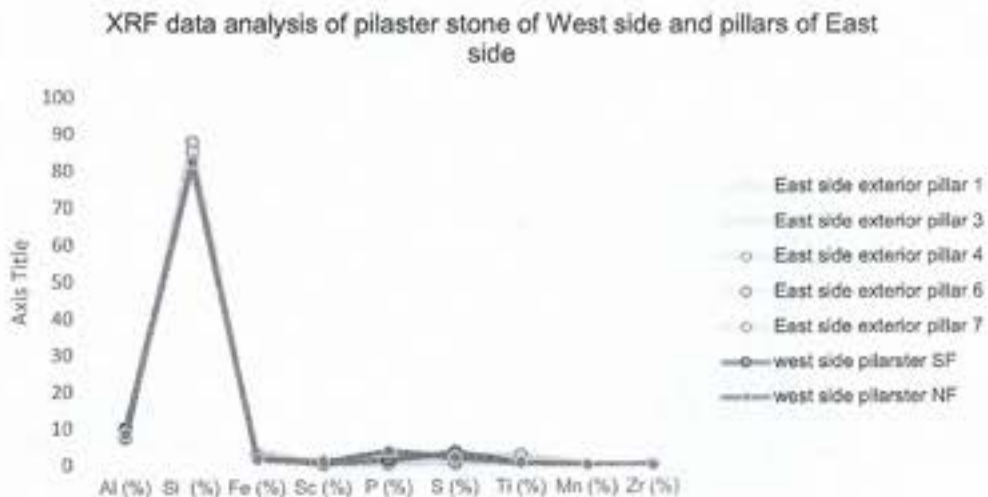
Table 13: Comparison of stone beams
(existing structure, interior and western wall)

Sl. No.	Location	Al (%)	Si (%)	Fe (%)	Sc (%)	P (%)	S (%)	Ti (%)	Zn (%)	Mn (%)	Mg (%)	Zr (%)	Pb (%)
1.	Existing structure, interior floor beams (south)	10	71	4.4	2.0	1.5	9.2	1.5	0.1	0.1	0.0	0.4	0.0
2.	Existing structure, interior floor beams (north)	9.2	73	3.6	2.7	2.4	8.1	0.6	0.1	0.1	0.0	0.1	0.0
3.	Average Existing structure, interior north wall western beam	3.3	70.5	1.5	0.9	0.0	23.6	0.15	0.0	0.0	0.0	0.0	0.0
4.	Average Existing structure, interior north wall eastern beam	4.1	78.4	1.1	2.5	0.0	13.7	0.3	0.0	0.0	0.0	0.0	0.0
5.	Average Western wall middle portion beam at top	7.1	82.1	4.9	0.5	2.9	1.5	0.9	0.0	0.1	0.0	0.1	0.4

4048
213
52

40458
214

Graph 6: XRF data analysis of pilaster stone of west side and pillars of existing structure



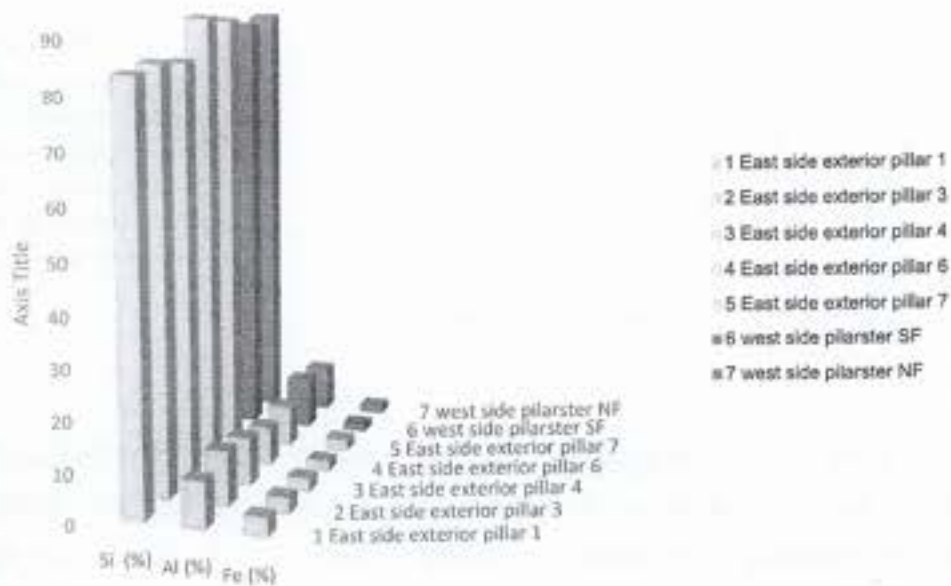
Wt% of the most of the constituents is similar except "Phosphorus and Sulfur" in Pillars and Pilaster stones in western wall and existing structure. Marginally higher content of Iron detected in pillars in existing structure may be due to slightly reddish tinge of stone. Both side stones are mature in nature due to presence of high silica content.



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25

**Graph 7: XRF data analysis
of pilaster stone of western chamber and pillars in existing structure
Only major constituent elements Silica, Aluminum and Iron**

XRF data analysis of pilaster stone of West side and pillars of East side - Only major constituent elements Silica, Aluminium and Iron

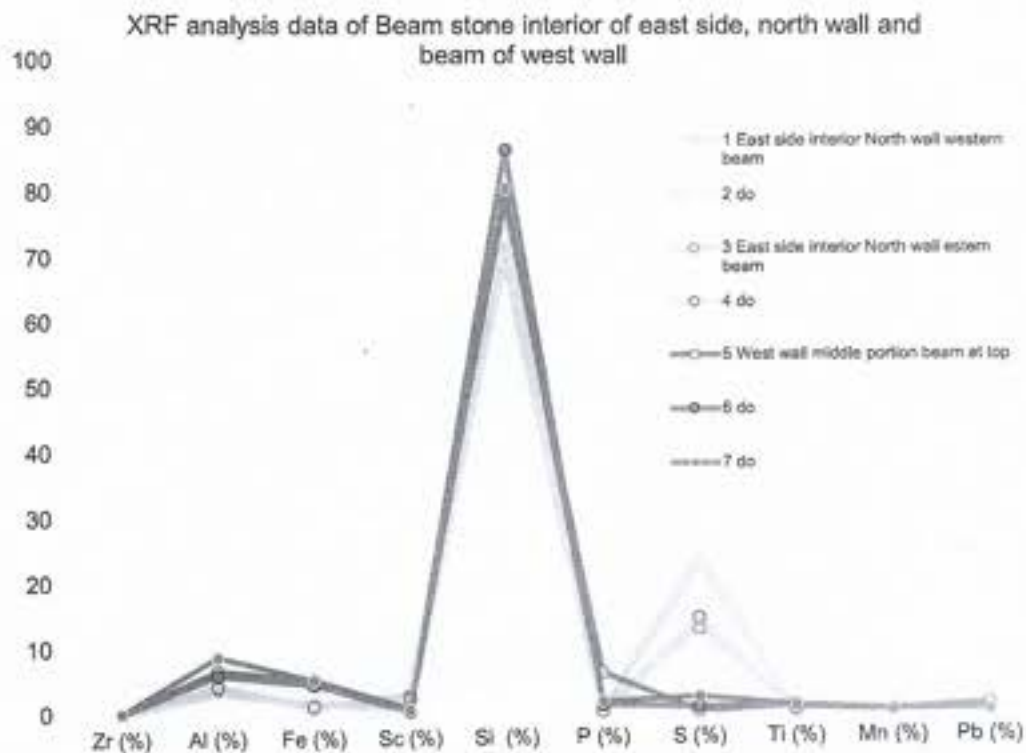


Major constituting elements wt% variations are very minor and which denotes that the both side's stone elemental compositions are almost similar.



40428
246

Graph 8: XRF analysis data of beam stone interior of existing structure, north wall and beam of western wall



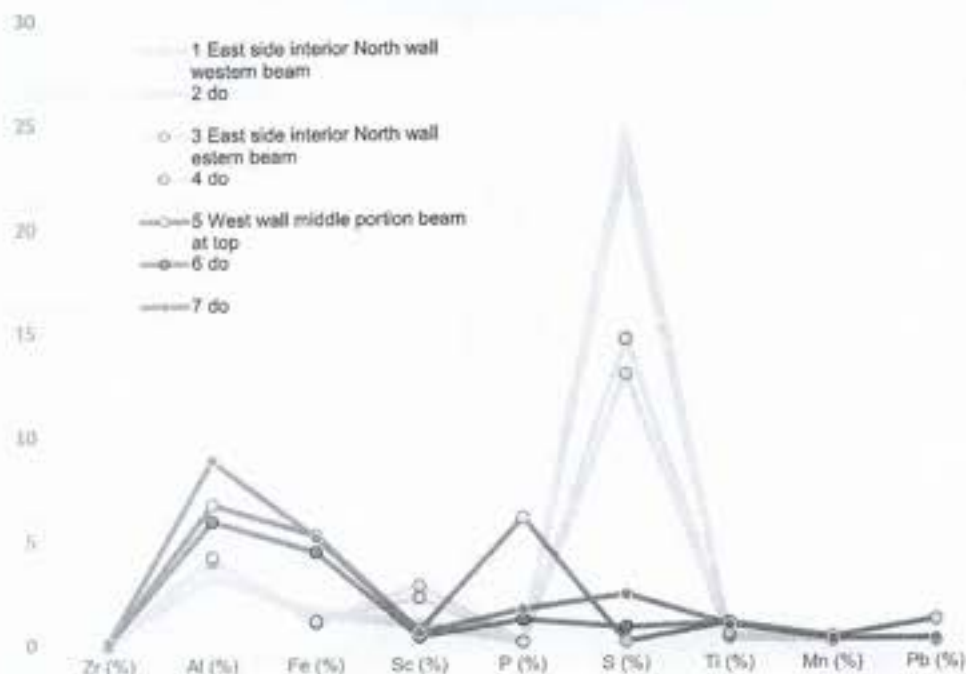
Beams reused in existing structure contain marginally lesser Silica and more Sulfur, but the remaining constituent elements are almost similar. The reasons for the cause may be attributed various reasons. The sulfur may be due to the application of multiple layer of white enamel paint in which the solvents used might have the content of Sulfur which ultimately ingressed into stone.



404M
2/2

Graph 9: XRF analysis data of beam stone interior of existing structure, north wall and beam of western wall (except Silica)

XRF analysis data of Beam stone interior of east side, north wall and beam of west wall (EXCEPT SILICA)

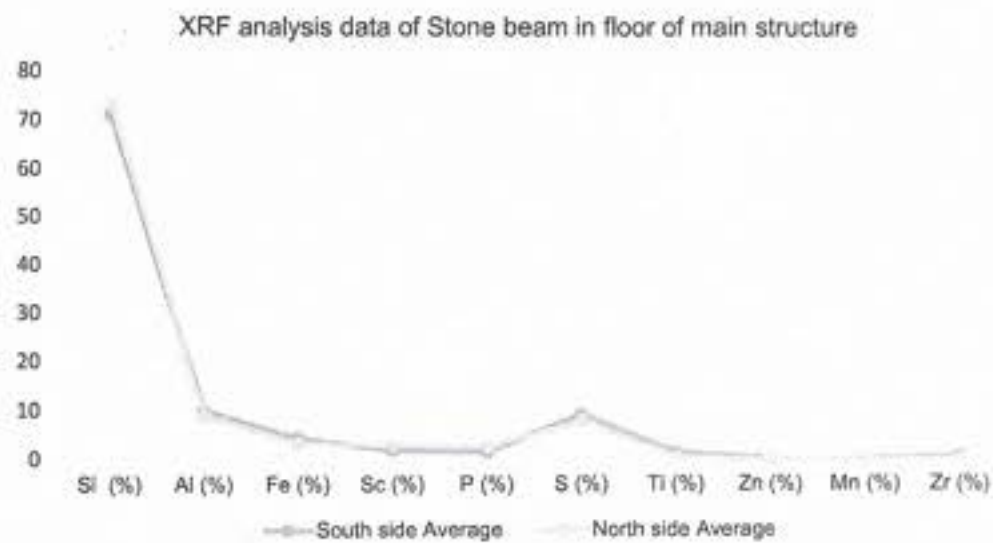


Aluminum, Iron, Lead and Phosphorus are more in the western wall in comparison to existing structure; however Scandium and Sulfur are lower.



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210

Graph 10: XRF analysis data of stone beam in floor of central hall



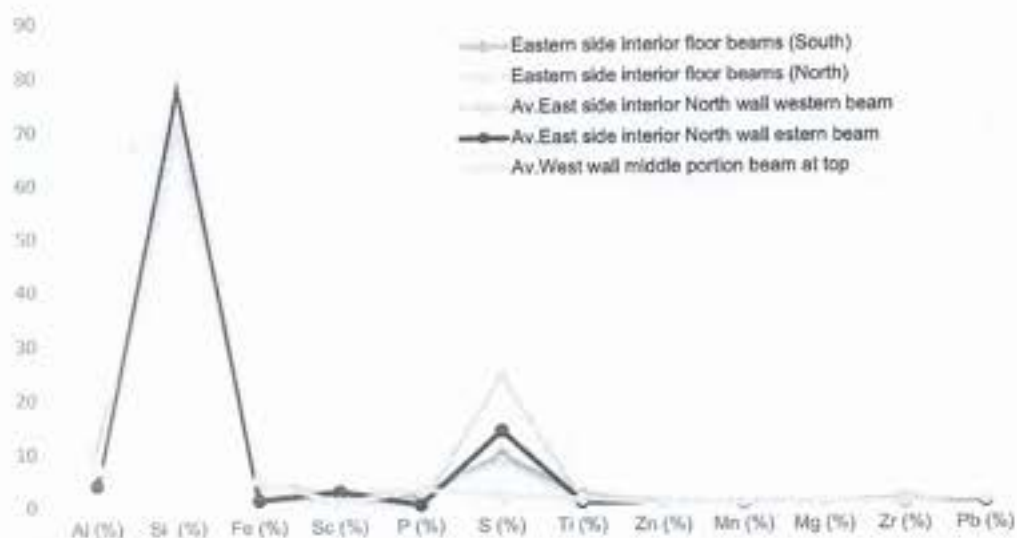
South and north side floor beams in central hall contains similar elemental composition.



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219

**Graph 11: Comparison of stone beams
in interior of existing structure and western wall**

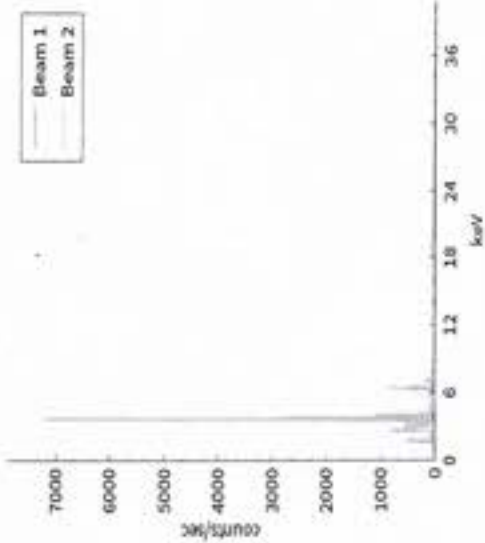
Comparison of stone beams Eastern side interior and western side



All the major and minor elements content are almost similar invariably in all the beams except sulfur content. Higher Sulfur content in existing structure may be attributed to various reasons such as enamel paint coat, burning of materials used for rituals etc.



Annexure 3: XRF data analysis of mortar samples

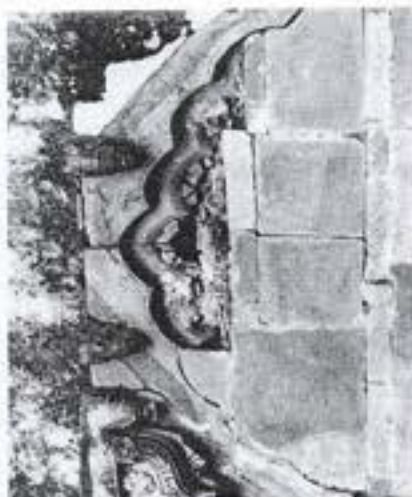
SI	Location of Mortar	Photograph	XRF Data	Spectra
No.	sample and id			
1.	Average western wall central portion 18082023-47-49		Ca (%) 18.3 Si (%) 10.6 Al (%) 2.8 Fe (%) 1.7 K (%) 1.2 P (%) 0.3 Ti (%) 0.2 S (%) 0.07 Sr (%) 0.03 Mg (%) 0.5 Mn (%) 0.07	



40438
230 59



SI Location of Mortar
No. sample and id
2. Average western wall
northwest closed
entrance
18082023- 51 to 54

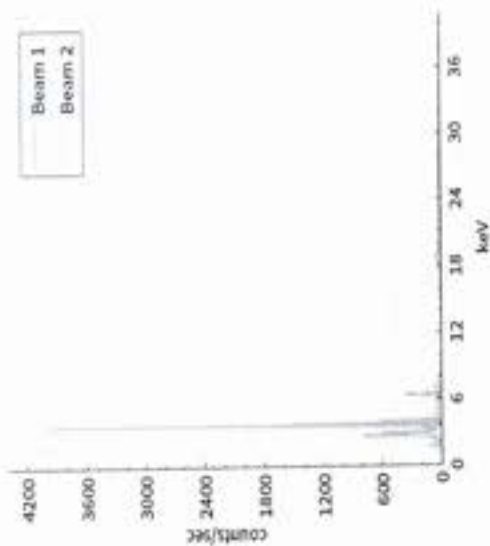


Photograph

XRF Data

Ca (%)	19.6
Si (%)	6.1
Al (%)	1.3
Fe (%)	1.4
K (%)	0.6
P (%)	0.3
Ti (%)	0.2
S (%)	3.4
Sr (%)	0.02
Mg(%)	1.1
Mn (%)	0.1

Spectra



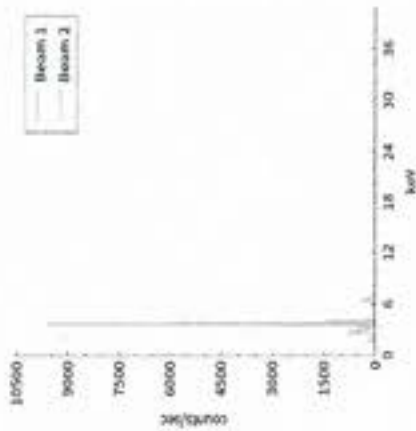
404 m
221

SI Location of Mortar
No. sample and id
3. Average western wall
northwest below
closed entrance
19082023-01 to 03

Photograph



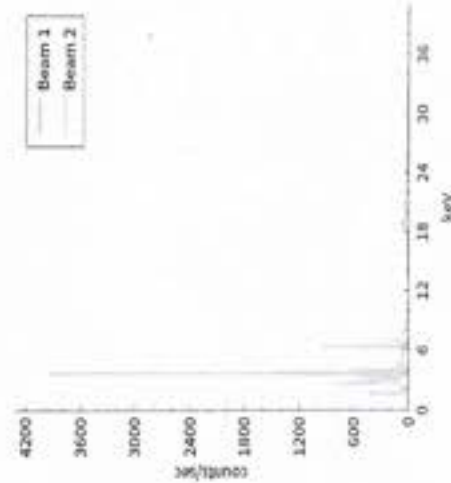
Spectra



XRF Data

Ca (%)	21.9
Si (%)	4.7
Al (%)	0.9
Fe (%)	0.8
K (%)	1.0
P (%)	0.1
Ti (%)	0.1
S (%)	3.4
Sr (%)	0.02

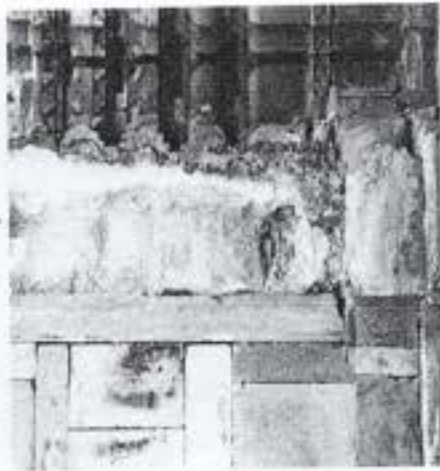
4. Average western wall
pilaster
19082023-14 to 18





SI No. 6
Location of Mortar sample and id
Average western wall south
19082023-19 to 23

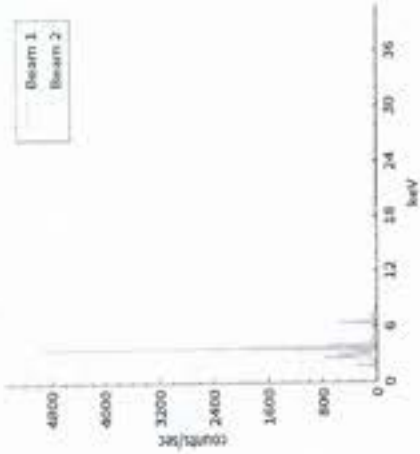
Photograph



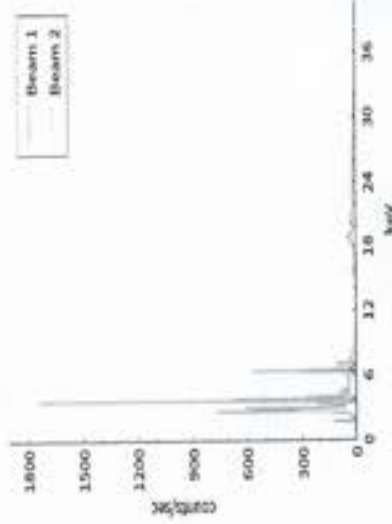
XRF Data

Ca (%)	17.2
Si (%)	8.3
Al (%)	1.6
Fe (%)	1.4
K (%)	1.0
P (%)	0.07
Ti (%)	0.2
S (%)	1.78
Sr (%)	0.02
Mg (%)	0.3
Mn (%)	0.05
Ca (%)	6.15
Si (%)	6.9
Al (%)	1.3
Fe (%)	2.85
K (%)	0.8
Ti (%)	0.35
S (%)	0.05
Sr (%)	0.01
Mn (%)	0.06

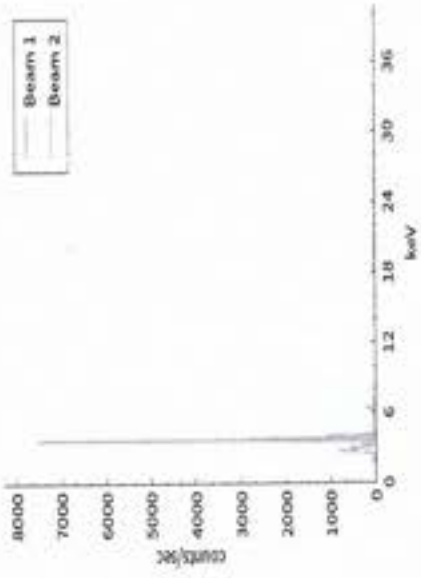
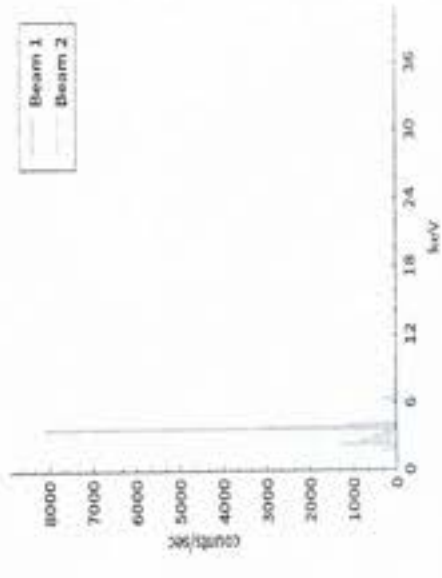
Spectra



6. Average western wall south closed door northern portion
19082023-32 to 33



40407
223

SI No.	Location of Mortar sample and id	Photograph	XRF Data	Spectra
7.	Average existing structure, north 19082023 -47,48 & 49		Ca (%) 19.4 Si (%) 3.57 Al (%) 0.5 Fe (%) 1.2 K (%) 0.9 P (%) 0.04 Ti (%) 0.1 S (%) 5.95 Sr (%) 0.05 Mn (%) 0.02	
8.	Average existing structure, north corridor 19082023 -53 to 54		Ca (%) 17.9 Si (%) 6.6 Al (%) 0.8 Fe (%) 0.7 K (%) 0.8 P (%) 0.04 Ti (%) 0.1 S (%) 5.95 Sr (%) 0.05 Mn (%) 0.02	



4042R
524



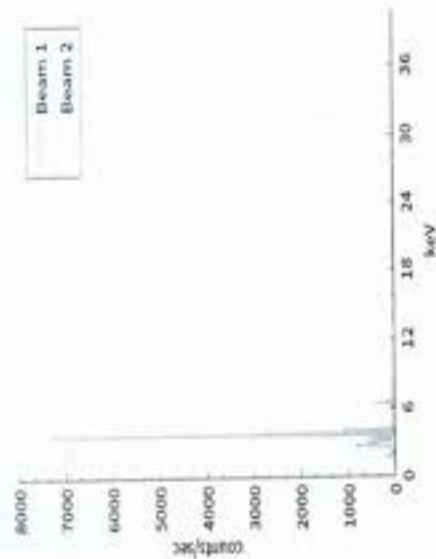
SI No. 9. Location of Mortar sample and id
Average existing structure, south corridor interior
19082023- 55,56



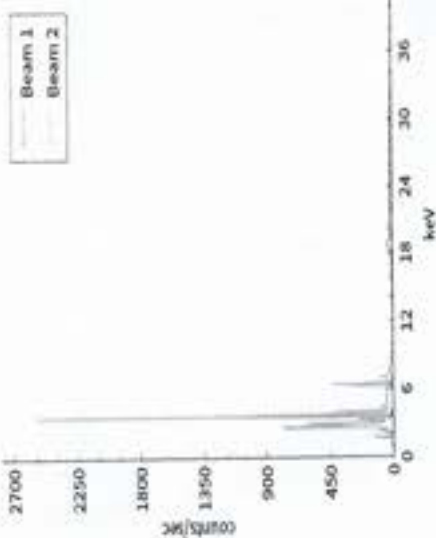
Photograph

XRF Data

Ca (%)	19.15
Si (%)	4.95
Al (%)	1.0
Fe (%)	1.25
K (%)	1.4
Ti (%)	0.2
S (%)	0.09
Sr (%)	0.03
Mn (%)	0.05
Ca (%)	13.55
Si (%)	7.65
Al (%)	1.3
Fe (%)	1.9
K (%)	1.05
P (%)	0.1
Ti (%)	0.25
S (%)	0.65
Sr (%)	0.17
Mn (%)	0.07



10. Average south cellar west side pillar
19082023- 57,58



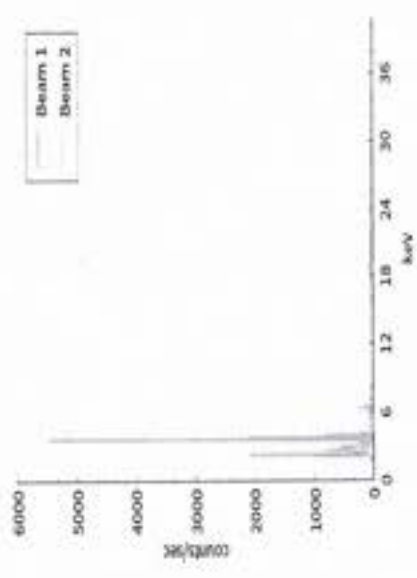
40438
225
64

SI Location of Mortar
 No. sample and id
 11. Average south cellar
 west wall
 19082023- 59, 60 &
 61

Photograph

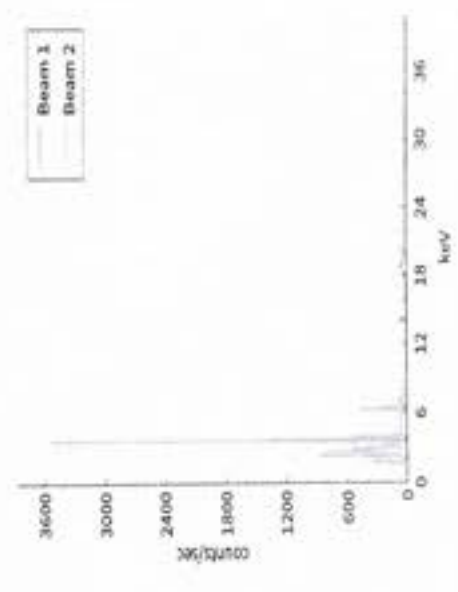


Spectra



XRF Data	
Ca (%)	14.4
Si (%)	1.23
Fe (%)	0.57
K (%)	0.5
Ti (%)	0.06
S (%)	9.77
Sr (%)	0.18
Mn (%)	0.02
Ca (%)	12.8
Si (%)	6.25
Al (%)	0.35
Fe (%)	0.7
K (%)	0.9
P (%)	0.05
S (%)	9.05
Sr (%)	0.04
Mg(%)	0.6
Mn (%)	0.02

12. Average south cellar
 east wall
 19082023- 62-63



40435
 226
 65



Location of Mortar

sample and id

South cellar east
gallery roof

19082023- 64

Photograph



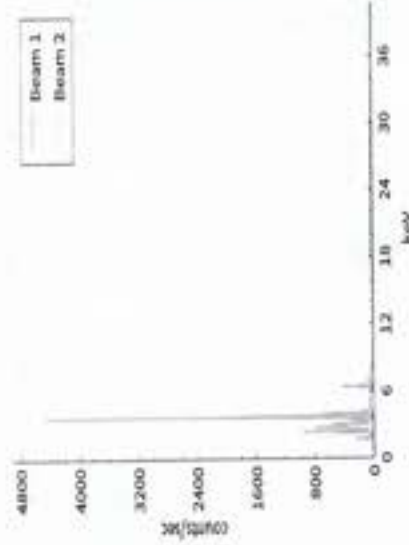
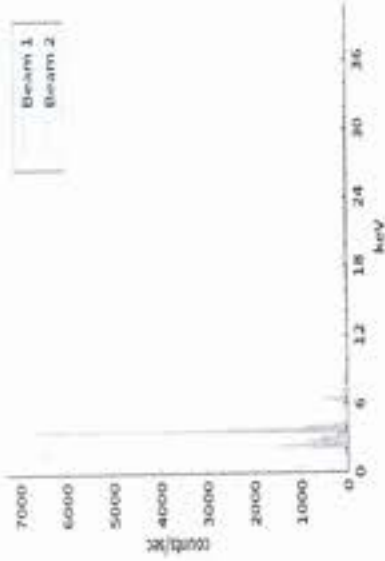
14. Average north side
outer structure
western portion
20082023- 02.03.04 &
06



XRF Data

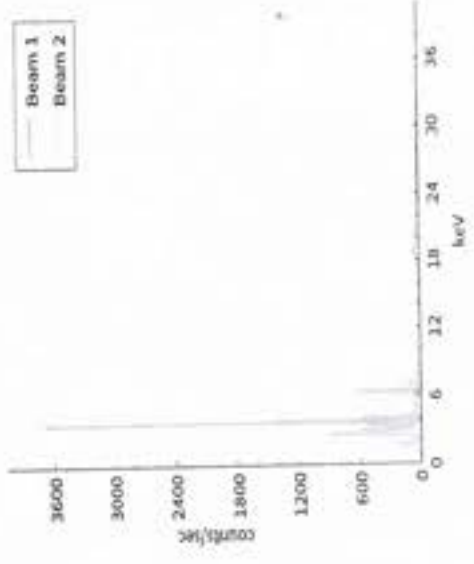
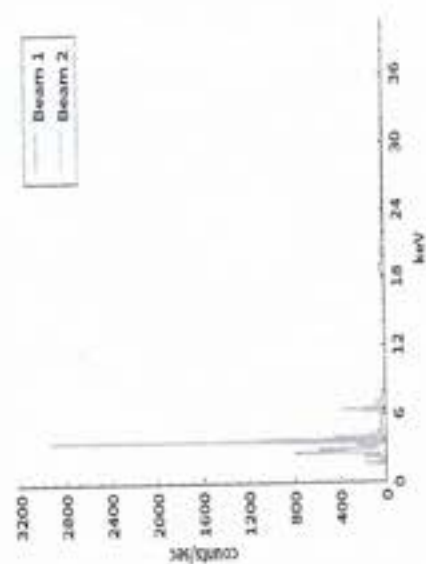
Ca (%)	11.8
Si (%)	1.9
Fe (%)	0.7
K (%)	0.4
P (%)	0.04
Ti (%)	0.1
S (%)	5.6
Sr (%)	0.01
Mn (%)	0.01
Ca (%)	12.45
Si (%)	7.68
Al (%)	1.5
Fe (%)	1.53
K (%)	1.28
P (%)	0.09
Ti (%)	0.2
S (%)	3.23
Sr (%)	0.07
Mn (%)	0.05

Spectra



404337
223
66

Spectra



XRF Data

Ca (%)	10.95
Si (%)	7.85
Al (%)	1.68
Fe (%)	1.65
K (%)	1.13
P (%)	0.09
Ti (%)	0.2
S (%)	1.23
Sr (%)	0.01
Mn (%)	0.04
Ca (%)	8.9
Si (%)	6.4
Al (%)	1.25
Fe (%)	1.6
K (%)	1.7
P (%)	0.08
Ti (%)	0.2
S (%)	0.55
Sr (%)	0.02
Mn (%)	0.04

Photograph



SI Location of Mortar
No. sample and id
15. Average north side
outer structure
eastern portion
20082023- 07,08,09 &
10

16. Average north side
outer structure
western column
20082023- 11-12



40407
220



Location of Mortar
sample and id
Average north cellar
N3 arch
20082023- 44 & 46

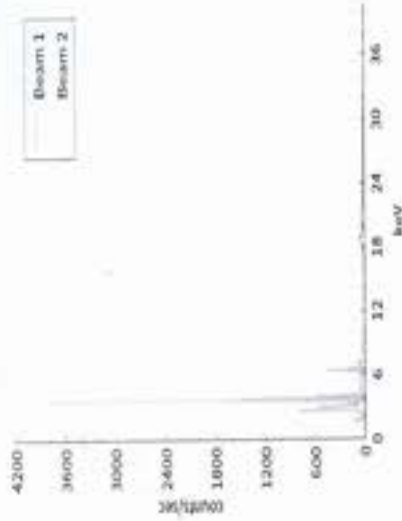
Photograph



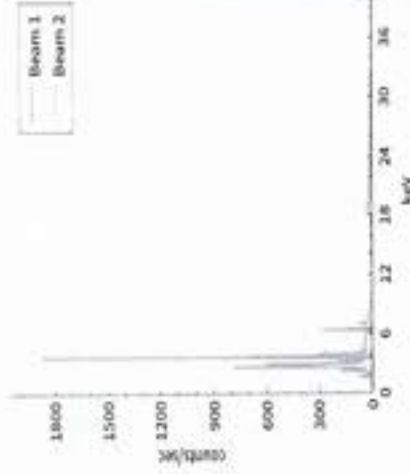
XRF Data

Ca (%)	9.2
Si (%)	4.05
Al (%)	0.3
Fe (%)	1.25
K (%)	0.6
P (%)	0.03
Ti (%)	0.1
S (%)	0.03
Sr (%)	0.02
Mn (%)	0.04
Ca (%)	13.16
Si (%)	4.84
Al (%)	0.35
Fe (%)	1.68
K (%)	0.86
P (%)	0.07
Ti (%)	0.15
S (%)	1.8
Sr (%)	0.03
Mn (%)	0.06

Spectra

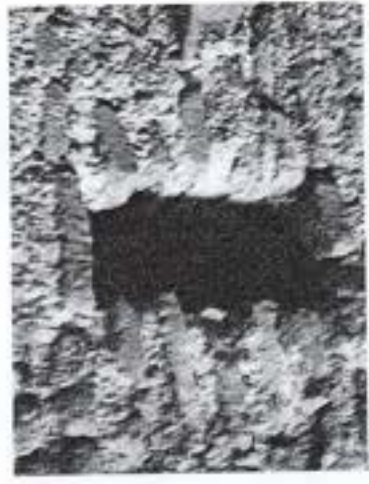


18. Average north dome
inner wall
21082023-
03,04,06,07 & 08



SI Location of Mortar
 No. sample and id
 19. Average south dome
 inner wall
 21082023- 20,21,22,&
 23

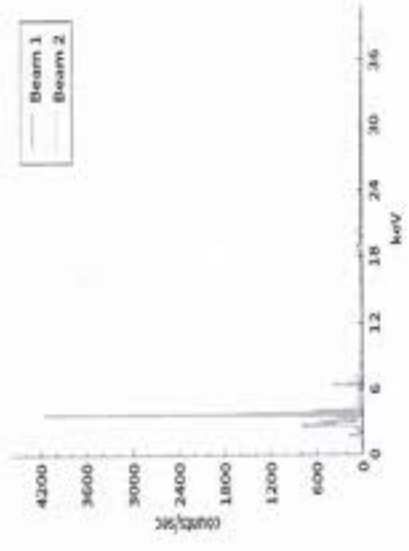
Photograph



XRF Data

Ca (%)	12.0
Si (%)	4.2
Al (%)	0.38
Fe (%)	1.53
K (%)	0.95
P (%)	0.23
Ti (%)	0.18
S (%)	0.63
Sr (%)	0.02
Mn (%)	0.05

Spectra



40437
 230



Table 14: XRF analysis data of lime mortar and plaster

Sl. No.	Location	Ca (%)	Si (%)	Al (%)	Fe (%)	K (%)	P (%)	Ti (%)	S (%)	Sr (%)	Mg (%)	Mn (%)
1	Average western wall central portion	18.3	10.6	2.8	1.7	1.2	0.3	0.2	0.07	0.03	0.5	0.07
2	Western wall northwest closed entrance	15.8	4.9	0.7	1.6	0.6	0.2	0.2	0.4	0.01	0.0	0.07
3	Western wall northwest closed entrance	13.5	8.0	1.9	1.5	0.9	0.5	0.2	3.9	0.01	0.0	0.06
4	Western wall northwest closed entrance	29.4	5.4	1.4	1.2	0.4	0.2	0.2	0.0	0.03	1.1	0.06
5	Average western wall northwest closed entrance	19.6	6.1	1.3	1.4	0.6	0.3	0.2	3.4	0.02	1.1	0.1
6	Western wall northwest below closed entrance	22.4	4.6	1.1	0.9	1.1	0.0	0.1	0.1	0.06	0.0	0.04
7	Western wall northwest below closed entrance	22.5	5.6	1.1	0.9	1.1	0.1	0.1	0.0	0.1	0.0	0.03
8	Western wall northwest below closed entrance	20.8	3.9	0.6	0.6	0.9	0.0	0.1	3.6	0.02	0.0	0.02

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Sl. No.	Location	Ca (%)	Si (%)	Al (%)	Fe (%)	K (%)	P (%)	Ti (%)	S (%)	Sr (%)	Mg (%)	Mn (%)
9	Average western wall northwest below closed entrance	21.9	4.7	0.9	0.8	1.0	0.1	0.1	3.4	0.06	0.0	0.0
10	Red surkhi	9.2	13.2	3.3	2.6	1.9	0.02	0.4	3.3	0.0	0.0	0.06
11	Red surkhi	10.8	11.3	2.5	3.1	1.5	0.03	0.3	3.4	0.0	1.4	0.08
12	Red surkhi	10.9	10.1	2.3	2.6	1.1	0.0	0.3	0.8	0.03	0.0	0.06
13	Average red surkhi	10.3	11.5	2.7	2.8	1.5	0.02	0.3	2.5	0.01	0.5	0.1
14	Fine plaster	21	13.6	2	1.1	1.2	0.06	0.2	0.2	0	2.1	0.05
15	Fine plaster	21.7	10.9	2.4	1.3	0.8	0.05	0.2	0.2	0.02	1.1	0.06
16	Average fine plaster	21.3	12.2	2.2	1.2	1	0.06	0.2	0.2	0.01	1.6	0.06
17	Drain area	8.4	35.8	2.6	1.2	0.5	0.04	0.2	0.1	0.03	0.7	0.04
18	Drain area	11.1	31.2	2.2	1.1	0.6	0.05	0.3	0.03	0.01	1.6	0.0
19	Western wall pilaster facing south	10.5	12.8	2.9	2.2	1.3	0.7	0.2	0.2	0.02	0.0	0.06
20	Western wall pilaster facing south	11.1	13.8	4.1	2.1	1.8	0.5	0.3	1.4	0.01	0.0	0.04
21	Western wall pilaster facing south	10.2	8.2	1.7	2	1.6	0.1	0.2	0.07	0.02	0.0	0.07
22	Western wall pilaster facing south	9.5	10.4	2.6	2.5	1.8	0.2	0.2	0.1	0.02	0.0	0.06
23	Average western wall pilaster	10.3	11.3	2.8	2.2	1.63	0.38	0.2	0.4	0.02	0.0	0.06
24	Western wall, south closed door southern portion	17.1	10	1.7	1.7	1.1	0.09	0.2	0.04	0.03	0.0	0.07



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Sl. No.	Location	Ca (%)	Si (%)	Al (%)	Fe (%)	K (%)	P (%)	Ti (%)	S (%)	Sr (%)	Mg (%)	Mn (%)
25	Western wall, south closed door southern portion	18.7	4.5	0.6	0.9	0.5	0.03	0.2	5	0.02	0.0	0.03
26	Western wall south closed door southern portion	15.9	10.5	2.4	1.6	1.4	0.1	0.2	0.3	0.02	1.0	0.05
27	Average western wall south	17.2	8.3	1.6	1.4	1.0	0.07	0.2	1.78	0.02	0.3	0.05
28	Lime surkhi	10.7	10	2.3	2.5	1.0	0.0	0.3	0	0.01	0.0	0.06
29	Lime surkhi	10.5	9.9	2.4	2.5	1.2	0.0	0.3	2.2	0.01	0.0	0.05
30	Lime surkhi	10.5	11.2	2.5	2.6	1.0	0.0	0.3	0.0	0.01	0.0	0.06
31	Average lime surkhi	10.6	10.4	2.4	2.5	1.1	0.0	0.3	0.7	0.01	0.0	0.06
32	Lime surkhi upper layer	23.4	14.1	0.9	0.9	0.4	0.2	0.08	0.2	0.02	0.0	0.04
33	Lime surkhi upper layer	14.5	24.5	1.7	1.1	0.5	0.2	0.1	2.2	0.01	0.7	0.04
34	Average lime surkhi upper layer	18.95	19.3	1.3	1.0	0.45	0.2	0.09	1.2	0.02	0.35	0.04
35	Western wall south closed door northern portion	6.4	6.6	1.4	2.9	0.8	0.0	0.4	0.1	0.01	0.0	0.06
36	Western wall south closed door northern portion	5.9	7.2	1.2	2.8	0.8	0.0	0.3	0.0	0.01	0.0	0.06
37	Average western wall south closed door northern portion	6.15	6.9	1.3	2.85	0.8	0.0	0.35	0.05	0.01	0.0	0.06

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Sl. No.	Location	Ca (%)	Si (%)	Al (%)	Fe (%)	K (%)	P (%)	Ti (%)	S (%)	Sr (%)	Mg (%)	Mn (%)
38	Western wall south closed door northern portion (lime surkhi)	9.7	8.5	1.9	2.5	1.1	0.0	0.3	0.4	0.01	0.0	0.04
39	Western wall south closed door northern portion (lime surkhi)	10.2	11.1	2.6	2.7	1.0	0.08	0.3	0.0	0.01	0.0	0.05
40	Average western wall south closed door northern portion (lime surkhi)	9.95	9.8	2.25	2.6	1.05	0.04	0.3	0.2	0.01	0.0	0.05
41	Western wall south closed door northern portion (upper layer)	11.4	12.4	3.9	2.4	0.9	0.1	0.3	0.0	0.02	0.0	0.1
42	Existing structure, north corridor north facing	20.7	2.6	0.3	0.8	0.8	0.03	0.1	0.1	0.04	0.0	0.04
43	Existing structure, north corridor north facing	16.1	3.6	0.4	0.8	0.8	0.0	0.09	0.07	0.03	0.0	0.03
44	Existing structure, north corridor north facing	21.5	4.5	0.8	0.8	1.1	0.03	0.1	0.08	0.04	0.0	0.04
45	Average existing structure, north	19.43	3.57	0.5	1.2	0.9	0.04	0.15	0.06	0.03	0.0	0.05
46	Existing structure, north corridor	16.9	7.6	0.9	0.7	0.8	0.03	0.1	6	0.04	0.0	0.02
47	Existing structure, north corridor	18.9	5.6	0.7	0.7	0.8	0.04	0.1	5.9	0.05	0.0	0.02



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Sl. No.	Location	Ca (%)	Si (%)	Al (%)	Fe (%)	K (%)	P (%)	Ti (%)	S (%)	Sr (%)	Mg (%)	Mn (%)
48	Average existing structure, north corridor	17.9	6.6	0.8	0.7	0.8	0.04	0.1	5.95	0.05	0.0	0.02
49	Existing structure, south corridor interior	19.6	5.1	1.1	1.3	1.4	0.0	0.2	0.08	0.03	0.0	0.05
50	Existing structure, south corridor interior	18.7	4.8	0.9	1.2	1.4	0.0	0.2	0.1	0.03	0.0	0.05
51	Average existing structure, south corridor interior	19.15	4.95	1.0	1.25	1.4	0.0	0.2	0.09	0.03	0.0	0.05
52	South cellar west side pillar	14.6	8.0	1.5	1.9	1.0	0.1	0.2	0.5	0.3	0.0	0.07
53	South cellar west side pillar	12.5	7.3	1.1	1.9	1.1	0.09	0.3	0.8	0.03	0.0	0.06
54	Average south cellar west side pillar	13.55	7.65	1.3	1.9	1.05	0.1	0.25	0.65	0.17	0.0	0.07
55	South cellar west wall	15.9	1.3	0.0	0.6	0.7	0.0	0.07	10.8	0.0	0.0	0.02
56	South cellar west wall	16.7	0.7	0.0	0.3	0.2	0.0	0.0	13.4	0.04	0.0	0.0
57	South cellar west wall	10.6	1.7	0.0	0.8	0.6	0.0	0.1	5.1	0.5	0.0	0.03
58	Average south cellar west wall	14.4	1.23	0.0	0.57	0.5	0.0	0.06	9.77	0.18	0.0	0.02
59	South cellar east wall	9.2	9.5	0.7	1.1	1.6	0.06	0.0	5.4	0.05	1.2	0.03
60	South cellar east wall	16.4	3.0	0.0	0.3	0.2	0.03	0.0	12.7	0.03	0.0	0.01
61	Average south cellar east wall	12.8	6.25	0.35	0.7	0.9	0.05	0.0	9.05	0.04	0.6	0.02

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Sl. No.	Location	Ca (%)	Si (%)	Al (%)	Fe (%)	K (%)	P (%)	Ti (%)	S (%)	Sr (%)	Mg (%)	Mn (%)
62	South cellar east gallery roof	11.8	1.9	0.0	0.7	0.4	0.04	0.1	5.6	0.01	0.0	0.01
63	North side outer structure western portion	12.1	8.6	1.5	1.5	1.4	0.1	0.2	0.9	0.02	0.0	0.05
64	North side outer structure western portion	10.1	6.1	1.2	1.6	1.1	0.05	0.2	0.6	0.02	0.0	0.05
65	North side outer structure western portion	10.5	8.5	1.8	1.6	1.4	0.1	0.2	4.3	0.02	0.0	0.04
66	North side outer structure western portion	17.1	7.5	1.5	1.4	1.2	0.1	0.2	7.1	0.2	0.0	0.04
67	Average north side outer structure western portion	12.45	7.68	1.5	1.53	1.28	0.09	0.2	3.23	0.07	0.0	0.05
68	North side outer structure eastern portion	10.8	9.1	1.6	1.8	1.6	0.08	0.2	1.3	0.01	0.0	0.05
69	North side outer structure eastern portion	7.1	8.2	2.0	2.4	1.1	0.1	0.3	0.4	0.02	0.0	0.05
70	North side outer structure eastern portion	15.2	6.7	2.1	1.2	0.9	0.09	0.2	1.8	0.01	0.0	0.03



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Sl. No.	Location	Ca (%)	Si (%)	Al (%)	Fe (%)	K (%)	P (%)	Ti (%)	S (%)	Sr (%)	Mg (%)	Mn (%)
71	North side outer structure eastern portion	10.7	7.4	1.0	1.2	0.9	0.1	0.1	1.4	0.01	0.0	0.04
72	Average north side outer structure eastern portion	10.95	7.85	1.68	1.65	1.13	0.09	0.2	1.23	0.01	0.0	0.04
73	North side outer structure western column	7.4	4.9	0.9	1.6	1.8	0.0	0.2	0.7	0.02	0.0	0.04
74	North side outer structure western column	10.4	7.9	1.6	1.6	1.6	0.08	0.2	0.4	0.02	0.0	0.04
75	Average north side outer structure western column	8.9	6.4	1.25	1.6	1.7	0.08	0.2	0.55	0.02	0.0	0.04
76	North cellar, N3 arch	10.5	4.7	0.6	1.2	0.6	0.06	0.1	0.05	0.01	0.0	0.03
77	North cellar, N3 arch	7.9	3.4	0.0	1.3	0.6	0.0	0.1	0.0	0.03	0.0	0.05
78	Average north cellar N3 arch	9.2	4.05	0.3	1.25	0.6	0.03	0.1	0.03	0.02	0.0	0.04
79	North dome inner wall	12.72	5.0	0.4	1.7	0.7	0.09	0.2	1.6	0.02	0.0	0.08
80	North dome inner wall	11.1	4.0	0.0	1.8	0.8	0.0	0.0	2.1	0.02	0.0	0.05
81	North dome inner wall	11.9	5.6	0.4	1.8	1.1	0.1	0.2	2.2	0.03	0.0	0.06
82	North dome inner wall	16.7	5.0	0.6	1.4	0.7	0.1	0.2	1.8	0.03	0.0	0.05
83	North dome inner wall	13.4	4.6	0.0	1.7	1.0	0.0	0.0	1.3	0.03	0.0	0.06

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Sl. No.	Location	Ca (%)	Si (%)	Al (%)	Fe (%)	K (%)	P (%)	Ti (%)	S (%)	Sr (%)	Mg (%)	Mn (%)
84	Average north dome inner wall	13.16	4.84	0.35	1.68	0.86	0.07	0.15	1.8	0.03	0.0	0.06
85	south dome inner wall	12.8	5.6	0.7	1.9	1.5	0.5	0.2	0.8	0.02	0.0	0.05
86	south dome inner wall	13.4	3.2	0.0	1.4	0.9	0.2	0.2	1.1	0.02	0.0	0.05
87	south dome inner wall	14	5.9	0.8	1.3	0.9	0.2	0.1	0.3	0.02	0.0	0.05
88	south dome inner wall	7.8	2.1	0.0	1.5	0.5	0.0	0.2	0.3	0.02	0.0	0.04
89	Average south dome inner wall	12	4.2	0.38	1.53	0.95	0.23	0.18	0.63	0.02	0.0	0.05



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Table 15: XRF analysis data of Lime Mortar

Sl. No.	Location	Ca (%)	Si (%)	Al (%)	Fe (%)	K (%)	P (%)	Ti (%)	S (%)	Sr (%)	Mg (%)	Mn (%)
1	Average western wall central portion	18.30	10.60	2.80	1.70	1.20	0.30	0.20	0.07	0.03	0.50	0.07
2	Average western wall northwest closed entrance	19.60	6.10	1.30	1.40	0.60	0.30	0.20	3.40	0.02	1.10	0.10
3	Average western wall northwest below closed entrance	21.90	4.70	0.90	0.80	1.00	0.10	0.10	3.40	0.06	0.00	0.00
4	Average western wall pilaster	10.30	11.30	2.80	2.20	1.63	0.38	0.20	0.40	0.02	0.00	0.06
5	Average western wall south	17.20	8.30	1.60	1.40	1.00	0.07	0.20	1.78	0.02	0.30	0.05
6	Average western wall south closed door northern portion	6.15	6.90	1.30	2.85	0.80	0.00	0.35	0.05	0.01	0.00	0.06
7	Average existing structure, north	19.43	3.57	0.50	1.20	0.90	0.04	0.15	0.06	0.03	0.00	0.05
8	Existing structure, north corridor	16.90	7.60	0.90	0.70	0.80	0.03	0.10	6.00	0.04	0.00	0.02
9	Existing structure, north corridor	18.90	5.60	0.70	0.70	0.80	0.04	0.10	5.90	0.05	0.00	0.02
10	Average existing structure, north corridor	17.90	6.60	0.80	0.70	0.80	0.04	0.10	5.95	0.05	0.00	0.02
11	Existing structure, south corridor interior	19.60	5.10	1.10	1.30	1.40	0.00	0.20	0.08	0.03	0.00	0.05

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Sl. No.	Location	Ca (%)	Si (%)	Al (%)	Fe (%)	K (%)	P (%)	Ti (%)	S (%)	Sr (%)	Mg (%)	Mn (%)
12	Existing structure, south corridor interior	18.70	4.80	0.90	1.20	1.40	0.00	0.20	0.10	0.03	0.00	0.05
13	Average existing structure, south corridor interior	19.15	4.95	1.00	1.25	1.40	0.00	0.20	0.09	0.03	0.00	0.05
14	South cellar west side pillar	14.60	8.00	1.50	1.90	1.00	0.10	0.20	0.50	0.30	0.00	0.07
15	South cellar west side pillar	12.50	7.30	1.10	1.90	1.10	0.09	0.30	0.80	0.03	0.00	0.06
16	Average south cellar west side pillar	13.55	7.65	1.30	1.90	1.05	0.10	0.25	0.65	0.17	0.00	0.07
17	South cellar west wall	15.90	1.30	0.00	0.60	0.70	0.00	0.07	10.80	0.00	0.00	0.02
18	South cellar west wall	16.70	0.70	0.00	0.30	0.20	0.00	0.00	13.40	0.04	0.00	0.00
19	South cellar west wall	10.60	1.70	0.00	0.80	0.60	0.00	0.10	5.10	0.50	0.00	0.03
20	Average south cellar west wall	14.40	1.23	0.00	0.57	0.50	0.00	0.06	9.77	0.18	0.00	0.02
21	South cellar east wall	9.20	9.50	0.70	1.10	1.60	0.06	0.00	5.40	0.05	1.20	0.03
22	South cellar east wall	16.40	3.00	0.00	0.30	0.20	0.03	0.00	12.70	0.03	0.00	0.01
23	Average south cellar east wall	12.80	6.25	0.35	0.70	0.90	0.05	0.00	9.05	0.04	0.60	0.02
24	South cellar east gallery roof	11.80	1.90	0.00	0.70	0.40	0.04	0.10	5.60	0.01	0.00	0.01
25	North side outer structure western portion	12.10	8.60	1.50	1.50	1.40	0.10	0.20	0.90	0.02	0.00	0.05
26	North side outer structure western portion	10.10	6.10	1.20	1.60	1.10	0.05	0.20	0.60	0.02	0.00	0.05
27	North side outer structure western portion	10.50	8.50	1.80	1.60	1.40	0.10	0.20	4.30	0.02	0.00	0.04
28	North side outer structure western portion	17.10	7.50	1.50	1.40	1.20	0.10	0.20	7.10	0.20	0.00	0.04



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Sl. No.	Location	Ca (%)	Si (%)	Al (%)	Fe (%)	K (%)	P (%)	Ti (%)	S (%)	Sr (%)	Mg (%)	Mn (%)
29	Average north side outer structure western portion	12.45	7.68	1.50	1.53	1.28	0.09	0.20	3.23	0.07	0.00	0.05
30	North side outer structure eastern portion	10.80	9.10	1.60	1.80	1.60	0.08	0.20	1.30	0.01	0.00	0.05
31	North side outer structure eastern portion	7.10	8.20	2.00	2.40	1.10	0.10	0.30	0.40	0.02	0.00	0.05
32	North side outer structure eastern portion	15.20	6.70	2.10	1.20	0.90	0.09	0.20	1.80	0.01	0.00	0.03
33	North side outer structure eastern portion	10.70	7.40	1.00	1.20	0.90	0.10	0.10	1.40	0.01	0.00	0.04
34	Average north side outer structure eastern portion	10.95	7.85	1.68	1.65	1.13	0.09	0.20	1.23	0.01	0.00	0.04
35	North side outer structure western column	7.40	4.90	0.90	1.60	1.80	0.0	0.20	0.70	0.02	0.00	0.04
36	North side outer structure western column	10.40	7.90	1.60	1.60	1.60	0.08	0.20	0.40	0.02	0.00	0.04
37	Average north side outer structure western column	8.90	6.40	1.25	1.60	1.70	0.08	0.20	0.55	0.02	0.00	0.04
38	North cellar N3 arch	10.50	4.70	0.60	1.20	0.60	0.06	0.10	0.05	0.01	0.00	0.03
39	North cellar N3 arch	7.90	3.40	0.00	1.30	0.60	0.00	0.10	0.00	0.03	0.00	0.05
40	Average north cellar N3 arch	9.20	4.05	0.30	1.25	0.60	0.03	0.10	0.03	0.02	0.00	0.04
41	North dome inner wall	12.72	5.00	0.40	1.70	0.70	0.09	0.20	1.60	0.02	0.00	0.08

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241
80

Sl. No.	Location	Ca (%)	Si (%)	Al (%)	Fe (%)	K (%)	P (%)	Ti (%)	S (%)	Sr (%)	Mg (%)	Mn (%)
42	North dome inner wall	11.10	4.00	0.0	1.80	0.80	0.0	0.0	2.10	0.02	0.00	0.05
43	North dome inner wall	11.90	5.60	0.40	1.80	1.10	0.10	0.20	2.20	0.03	0.00	0.06
44	North dome inner wall	16.70	5.00	0.60	1.40	0.70	0.10	0.20	1.80	0.03	0.00	0.05
45	North dome inner wall	13.40	4.60	0.00	1.70	1.00	0.00	0.00	1.30	0.03	0.00	0.06
46	Average north dome inner wall	13.16	4.84	0.35	1.68	0.86	0.07	0.15	1.80	0.03	0.00	0.06
47	South dome inner wall	12.80	5.60	0.70	1.90	1.50	0.50	0.20	0.80	0.02	0.00	0.05
48	South dome inner wall	13.40	3.20	0.00	1.40	0.90	0.20	0.20	1.10	0.02	0.00	0.05
49	South dome inner wall	14.00	5.90	0.80	1.30	0.90	0.20	0.10	0.30	0.02	0.00	0.05
50	South dome inner wall	7.80	2.10	0.00	1.50	0.50	0.00	0.20	0.30	0.02	0.00	0.04
51	Average south dome inner wall	12.00	4.20	0.38	1.53	0.95	0.23	0.18	0.63	0.02	0.00	0.05



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242



Table 16: Western wall lime mortar

Sl. No.	Location	Ca (%)	Si (%)	Al (%)	Fe (%)	K (%)	P (%)	Ti (%)	S (%)	Sr (%)	Mg (%)	Mn (%)
1	Average western wall central portion	18.30	10.60	2.80	1.70	1.20	0.30	0.20	0.07	0.03	0.50	0.07
2	Average western wall northwest closed entrance	19.60	6.10	1.30	1.40	0.60	0.30	0.20	3.40	0.02	1.10	0.10
3	Average western wall northwest below closed entrance	21.90	4.70	0.90	0.80	1.00	0.10	0.10	3.40	0.06	0.00	0.00
4	Average western wall pilaster	10.30	11.30	2.80	2.20	1.63	0.38	0.20	0.40	0.02	0.00	0.06
5	Average western wall south	17.20	8.30	1.60	1.40	1.00	0.07	0.20	1.78	0.02	0.30	0.05
6	Average western wall south closed door northern portion	6.15	6.90	1.30	2.85	0.80	0.00	0.35	0.05	0.01	0.00	0.06

404 m
243
82

Table 17: XRF analysis data of lime mortar
(existing structure)

Sl. No.	Location	Ca (%)	Si (%)	Al (%)	Fe (%)	K (%)	P (%)	Ti (%)	S (%)	Sr (%)	Mg (%)	Mn (%)
1	Average existing structure, north	19.43	3.57	0.50	1.20	0.90	0.04	0.15	0.06	0.03	0.00	0.05
2	Average existing structure, north corridor	17.90	6.60	0.80	0.70	0.80	0.04	0.10	5.95	0.05	0.00	0.02
3	Average existing structure, south corridor	19.15	4.95	1.00	1.25	1.40	0.00	0.20	0.09	0.03	0.00	0.05



40452
244
83



Table 18: XRF analysis data of lime mortar
(south and north cellar)

Sl. No.	Location	Ca (%)	Si (%)	Al (%)	Fe (%)	K (%)	P (%)	Ti (%)	S (%)	Sr (%)	Mg (%)	Mn (%)
1	Average south cellar west side beam	13.55	7.65	1.30	1.90	1.05	0.10	0.25	0.65	0.17	0.00	0.07
2	Average south cellar west wall	14.40	1.23	0.00	0.57	0.50	0.00	0.06	9.77	0.18	0.00	0.02
3	Average south cellar east wall	12.80	6.25	0.35	0.70	0.90	0.05	0.00	9.05	0.04	0.60	0.02
4	South cellar east gallery roof	11.80	1.90	0.00	0.70	0.40	0.04	0.10	5.60	0.01	0.00	0.01
5	Average north cellar N3 arch	9.20	4.05	0.30	1.25	0.60	0.03	0.10	0.03	0.02	0.00	0.04

40438
245

Table 19: XRF analysis data of lime mortar
(western wall and dome)

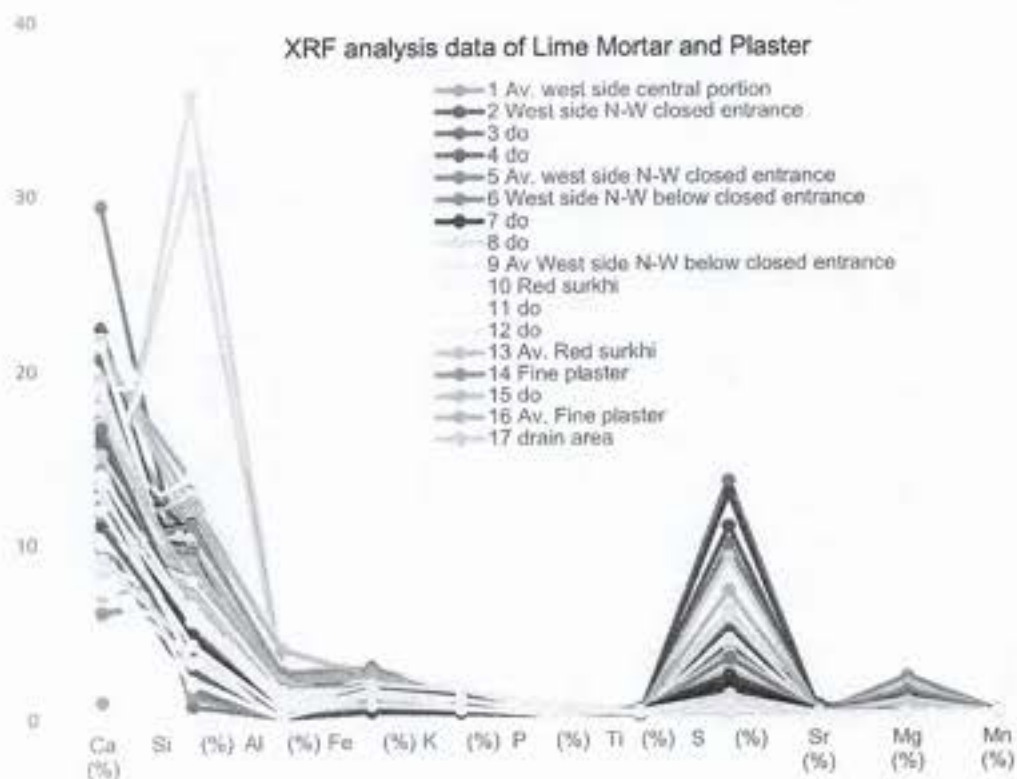
Sl. No.	Location	Ca (%)	Si (%)	Al (%)	Fe (%)	K (%)	P (%)	Ti (%)	S (%)	Sr (%)	Mg (%)	Mn (%)
1	Average western wall central portion	18.30	10.60	2.80	1.70	1.20	0.30	0.20	0.07	0.03	0.50	0.07
2	Average western wall northwest closed entrance	19.60	6.10	1.30	1.40	0.60	0.30	0.20	3.40	0.02	1.10	0.10
3	Average western wall northwest below closed entrance	21.90	4.70	0.90	0.80	1.00	0.10	0.10	3.40	0.06	0.00	0.00
4	Average western wall pilaster	10.30	11.30	2.80	2.20	1.63	0.38	0.20	0.40	0.02	0.00	0.06
5	Average western wall south	17.20	8.30	1.60	1.40	1.00	0.07	0.20	1.78	0.02	0.30	0.05
6	Average north dome inner wall	13.40	4.60	0.00	1.70	1.00	0.00	0.00	1.30	0.03	0.00	0.06
7	Average south dome inner wall	12.00	4.20	0.38	1.53	0.95	0.23	0.18	0.63	0.02	0.00	0.05



40427
248
85

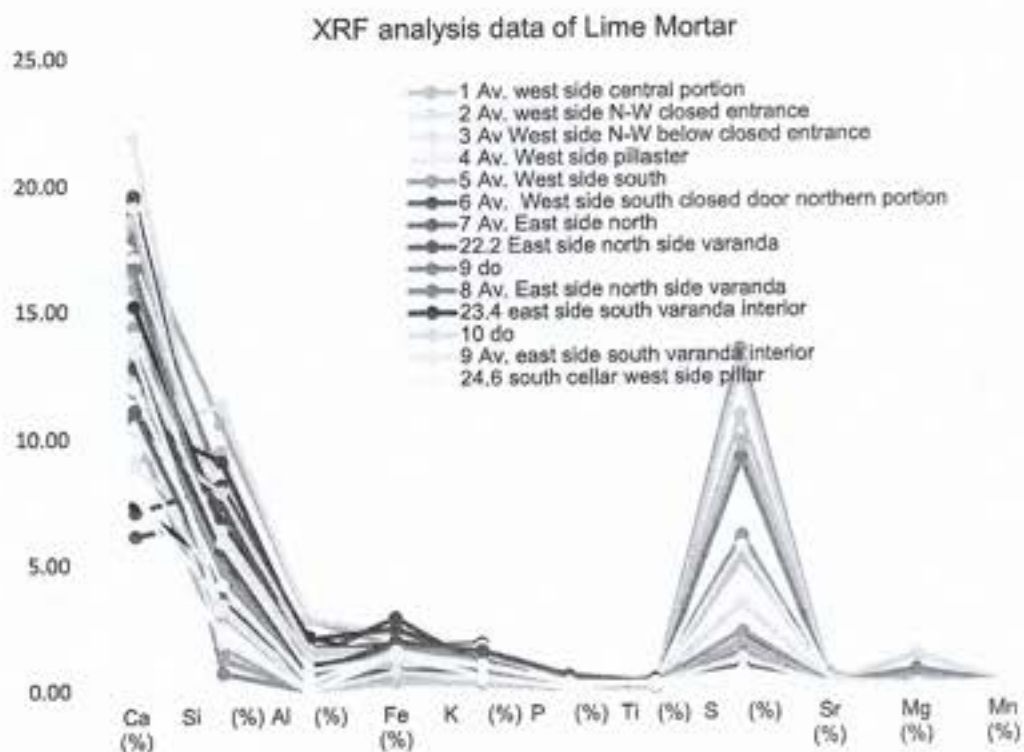
40437
24

Graph 12: XRF analysis data of lime mortar and plaster



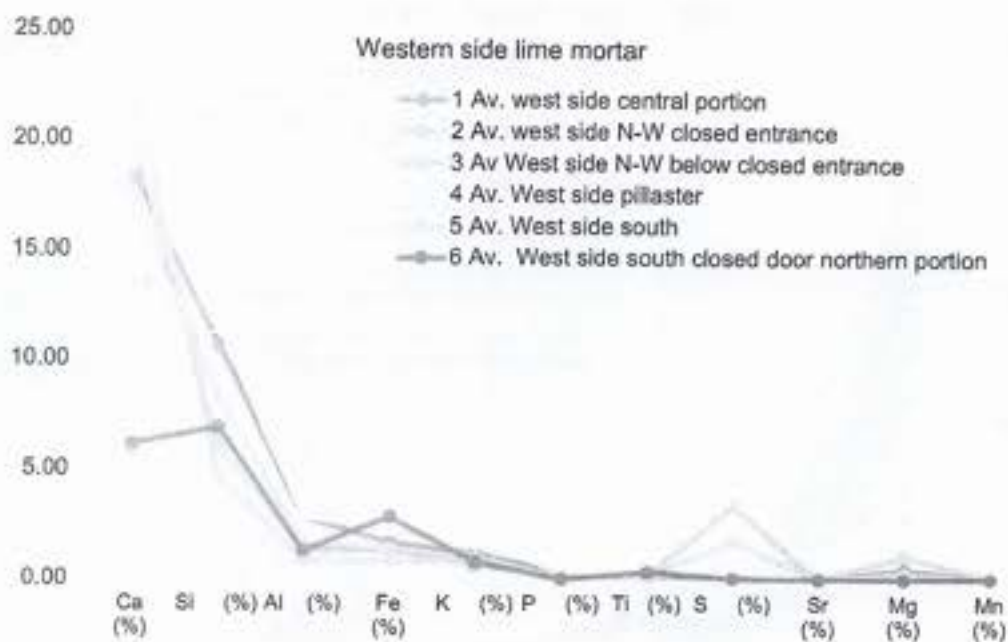
406127
240

Graph 13: XRF analysis data of lime mortar



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24/11/20

Graph 14: Lime mortar in western wall

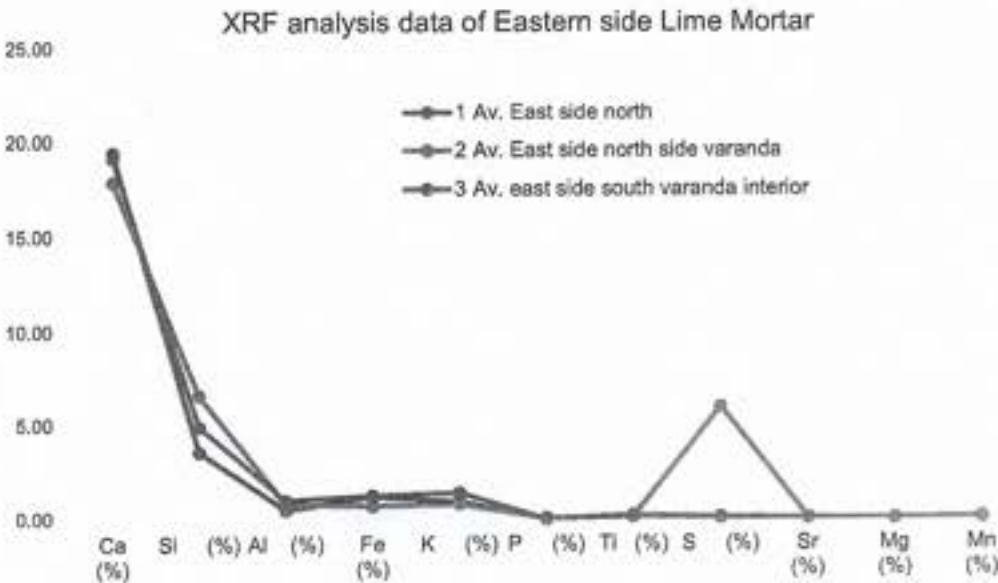


Lime mortar in pilaster of western wall and northern portion of closed door of south hall show low calcium content in comparison to Silica which is unlikely in case of lime mortar preparation. On visual observation it is noticed that lime mortar in these areas has been used in crude manner and lime and sand ratio was not maintained. Central and northern portions of western wall contains almost similar composition except sulfur.



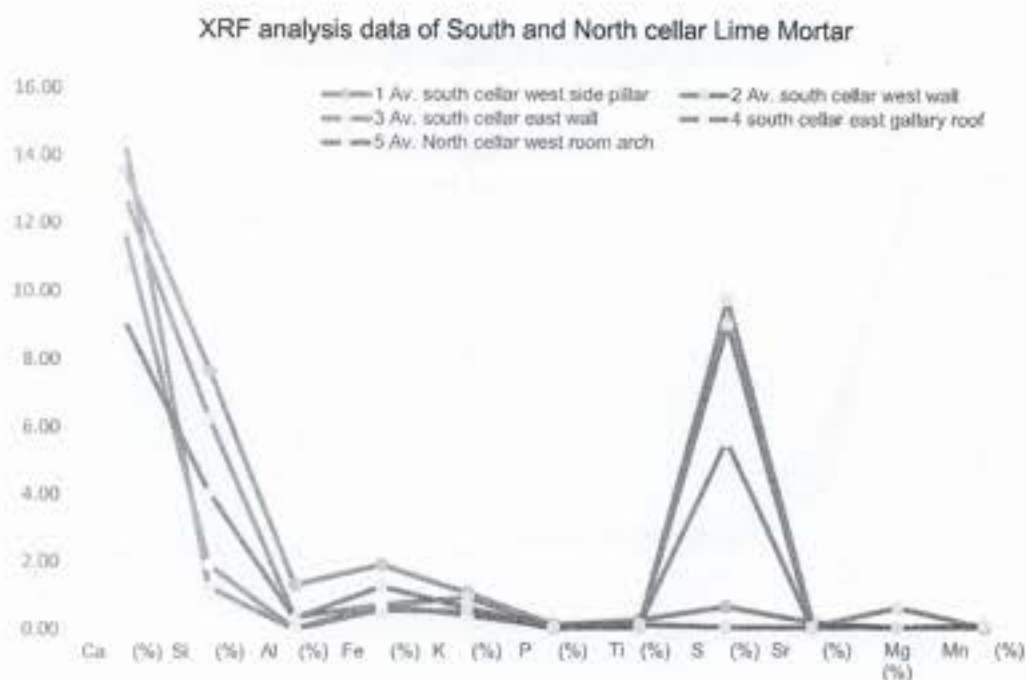
404131
250

Graph 15: XRF analysis data of lime mortar in existing structure



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25/1

Graph 16: XRF analysis data of lime mortar in south and north cellar

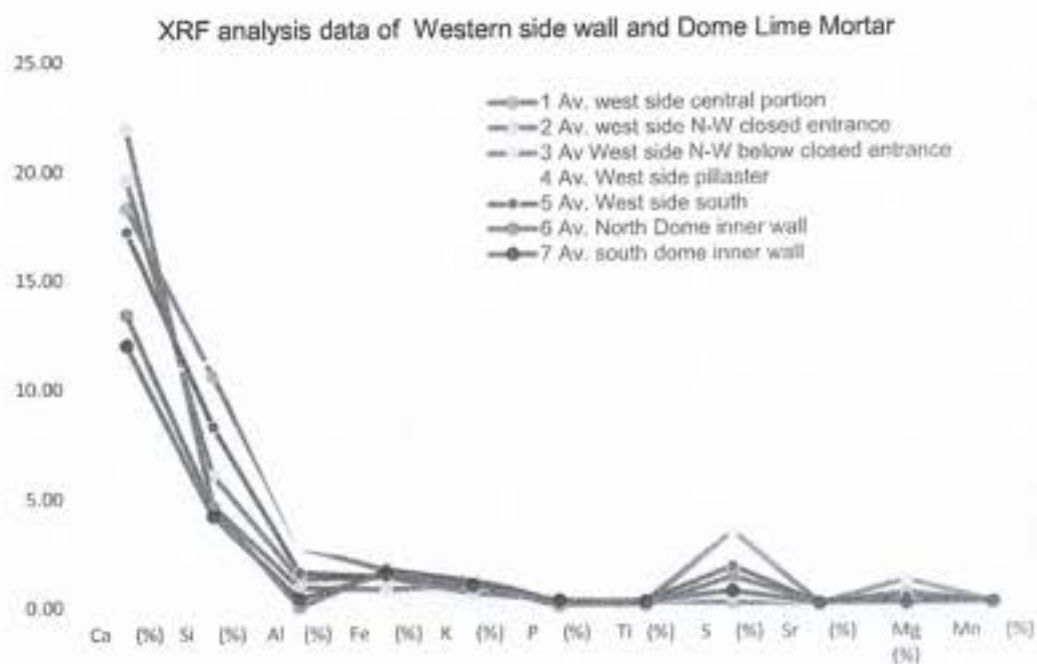


Calcium and Sulfur content is lower in north cellar in comparison to south cellar. It is to be noted that south cellar have lot of soot deposition.



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252

Graph 17: XRF analysis data of lime mortar in western wall and dome

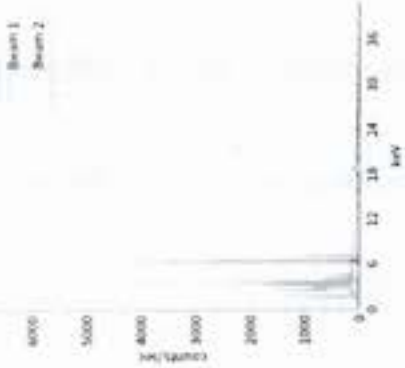


On comparing lime mortar data of western wall (northern and central portion) and dome, it is observed that Calcium content is higher in western wall in comparison to dome. Mortar composition of both the domes is similar whereas mortar in western wall is different from the dome in terms of wt% of lime and sand.





Annexure 4: XRF data analysis of brick samples

Sl	Location of Brick	Photograph	XRF Data	Spectra
No.	sample and id			
1.	Average south cellar modern brick 19082023-69,70		Si (%) 60.20 Fe (%) 14.80 Al (%) 16.25 S (%) 3.00 P (%) 0.90 Ti (%) 1.35 Mn (%) 0.20 Sc (%) 1.35 Zn (%) 0.05 Zr (%) 0.10 Sr (%) 0.08 Mg (%) 0.00	

40435
253 92

SI Location of Brick
 No. sample and id
 2. Average western wall,
 southwest corner
 19082023-71,72,73 &
 74

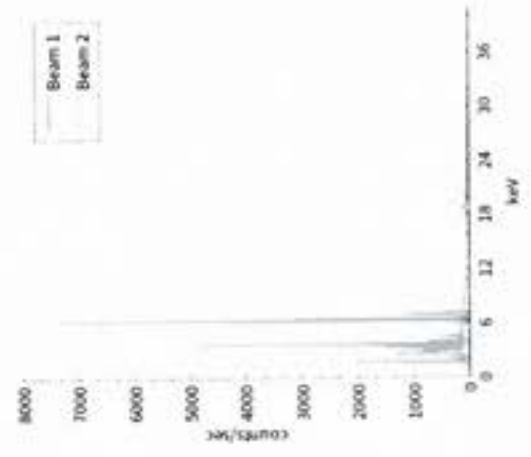
Photograph



XRF Data

Si (%)	59.93
Fe (%)	13.45
Al (%)	14.75
S (%)	3.75
P (%)	4.35
Ti (%)	1.25
Mn (%)	0.18
Sc (%)	1.15
Zn (%)	0.05
Zr (%)	0.12
Sr (%)	0.06
Mg (%)	1.18

Spectra



40437
 254



SI No. 19082023-75 & 76
Location of Brick sample and id
Average western wall,
north corner

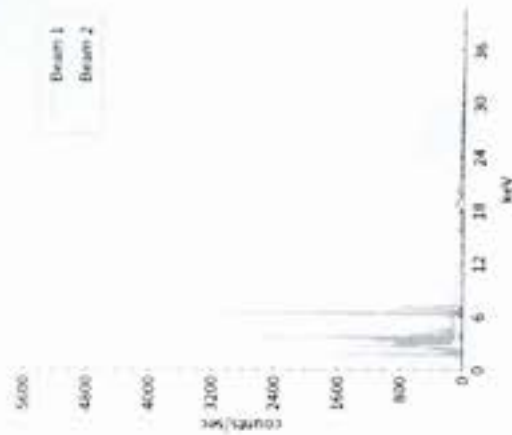
Photograph



XRF Data

Si (%)	57.25
Fe (%)	14.55
Al (%)	13.35
S (%)	6.55
P (%)	5.05
Ti (%)	1.30
Mn (%)	0.20
Sc (%)	1.45
Zn (%)	0.07
Zr (%)	0.10
Sr (%)	0.06
Mg (%)	0.00

Spectra



404 17
255-
94

SI Location of Brick
No. sample and id
4. Average north side
 outer structure column
 20082023-13, 14 & 15

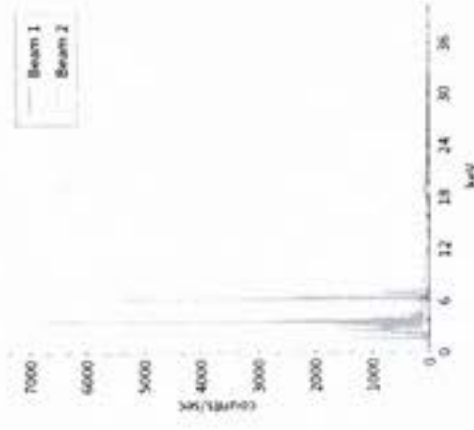
Photograph



XRF Data

Si (%)	52.40
Fe (%)	13.10
Al (%)	14.10
S (%)	15.65
P (%)	0.95
Ti (%)	1.05
Mn (%)	0.20
Sc (%)	2.30
Zn (%)	0.05
Zr (%)	0.10
Sr (%)	0.10
Mg (%)	0.00

Spectra



402128
256



SI Location of Brick
No. sample and id
5. Average north side
outer structure
eastern portion
20082023-18,
19,20,21,& 22

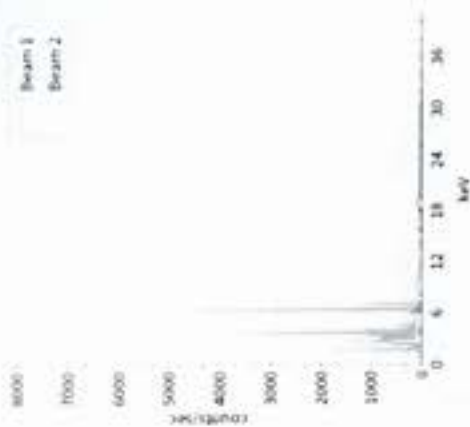
Photograph



XRF Data

Si (%)	56.09
Fe (%)	16.92
Al (%)	14.22
S (%)	6.98
P (%)	2.08
Ti (%)	1.30
Mn (%)	0.32
Sc (%)	2.35
Zn (%)	0.07
Zr (%)	0.13
Sr (%)	0.13
Mg (%)	0.00

Spectra



40438
257

SI Location of Brick
 No. sample and id
 6. Average north cellar
 inner room
 20082023-
 33,34,35,36,37,38 &
 39

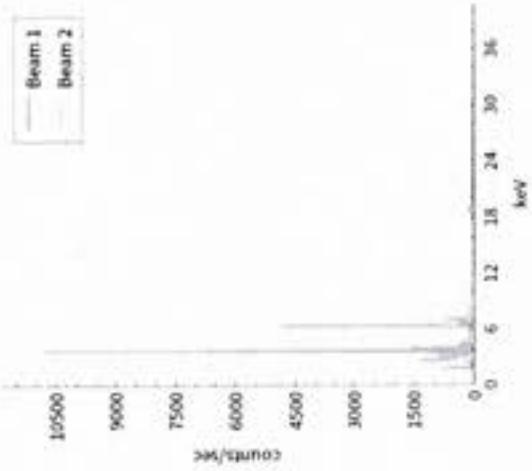
Photograph



XRF Data

Si (%)	56.80
Fe (%)	21.34
Al (%)	12.93
S (%)	2.13
P (%)	0.87
Ti (%)	1.00
Mn (%)	0.29
Sc (%)	3.94
Zn (%)	0.26
Zr (%)	0.20
Sr (%)	0.14
Mg (%)	0.00

Spectra



850
 40407



SI No. 7.
Location of Brick sample and id
Average north cellar
east wall
20082023-40, 41 & 42

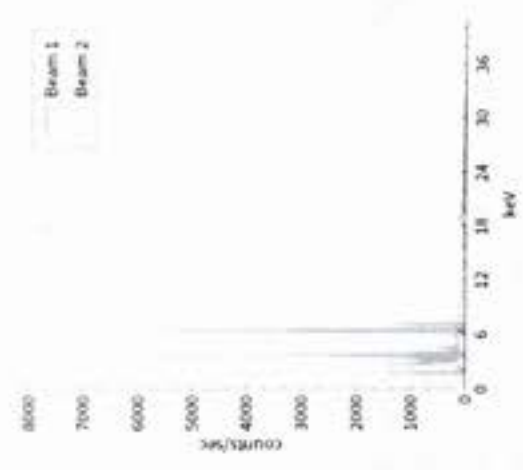
Photograph



XRF Data

Si (%)	59.73
Fe (%)	19.53
Al (%)	12.37
S (%)	2.20
P (%)	1.23
Ti (%)	1.07
Mn (%)	0.33
Sc (%)	2.87
Zn (%)	0.09
Zr (%)	0.20
Sr (%)	0.10
Mg (%)	0.00

Spectra



40427
259

SI Location of Brick
No. sample and id
8. Average north dome
 inner wall
 21082023-13 & 14

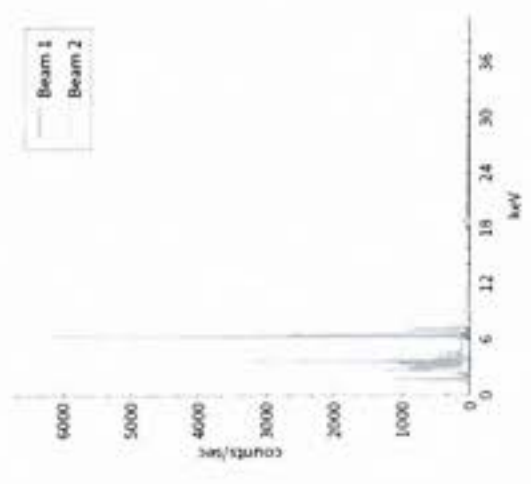
Photograph



XRF Data

Si (%)	53.80
Fe (%)	19.47
Al (%)	14.00
S (%)	7.13
P (%)	1.80
Ti (%)	1.53
Mn (%)	0.27
Sc (%)	1.50
Zn (%)	0.07
Zr (%)	0.17
Sr (%)	0.13
Mg (%)	0.00

Spectra



40427
260



SI Location of Brick
No. sample and id
9. Average south dome
inner wall
21082023-16, 17 & 18

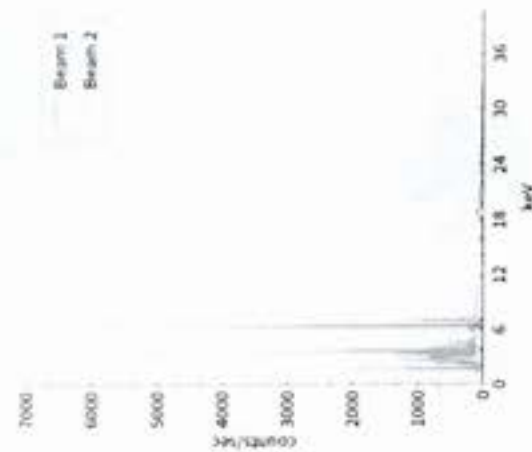
Photograph



XRF Data

Si (%)	57.97
Fe (%)	13.13
Al (%)	14.20
S (%)	7.07
P (%)	3.97
Ti (%)	1.27
Mn (%)	0.23
Sc (%)	1.20
Zn (%)	0.09
Zr (%)	0.13
Sr (%)	0.08
Mg (%)	1.27

Spectra



40428
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Table 20: XRF analysis data of bricks
(western wall, south and north cellar, dome and ruined outer structure)

Sl. No.	Location	Si (%)	Fe (%)	Al (%)	S (%)	P (%)	Ti (%)	Mn (%)	Sc (%)	Zn (%)	Zr (%)	Sr (%)	Mg (%)
1	Average south cellar modern brick	60.20	14.80	16.25	3.00	0.90	1.35	0.20	1.35	0.05	0.10	0.08	0.00
2	Average western wall, southwest corner	59.93	13.45	14.75	3.75	4.35	1.25	0.18	1.15	0.05	0.12	0.06	1.18
3	Average western wall. north corner	57.25	14.55	13.35	6.55	5.05	1.30	0.20	1.45	0.07	0.10	0.06	0.00
4	Average north side outer structure column	52.40	13.10	14.10	15.65	0.95	1.05	0.20	2.30	0.05	0.10	0.10	0.00
5	Average north side outer structure eastern portion	56.09	16.92	14.22	6.98	2.08	1.30	0.32	2.35	0.07	0.13	0.13	0.00
6	Average north cellar inner room	56.80	21.34	12.93	2.13	0.87	1.00	0.29	3.94	0.26	0.20	0.14	0.00
7	Average north cellar east wall	59.73	19.53	12.37	2.20	1.23	1.07	0.33	2.87	0.09	0.20	0.10	0.00
8	Average north dome inner wall	53.80	19.47	14.00	7.13	1.80	1.53	0.27	1.50	0.07	0.17	0.13	0.00
9	Average south dome inner wall	57.97	13.13	14.20	7.07	3.97	1.27	0.23	1.20	0.09	0.13	0.08	1.27



262
110428



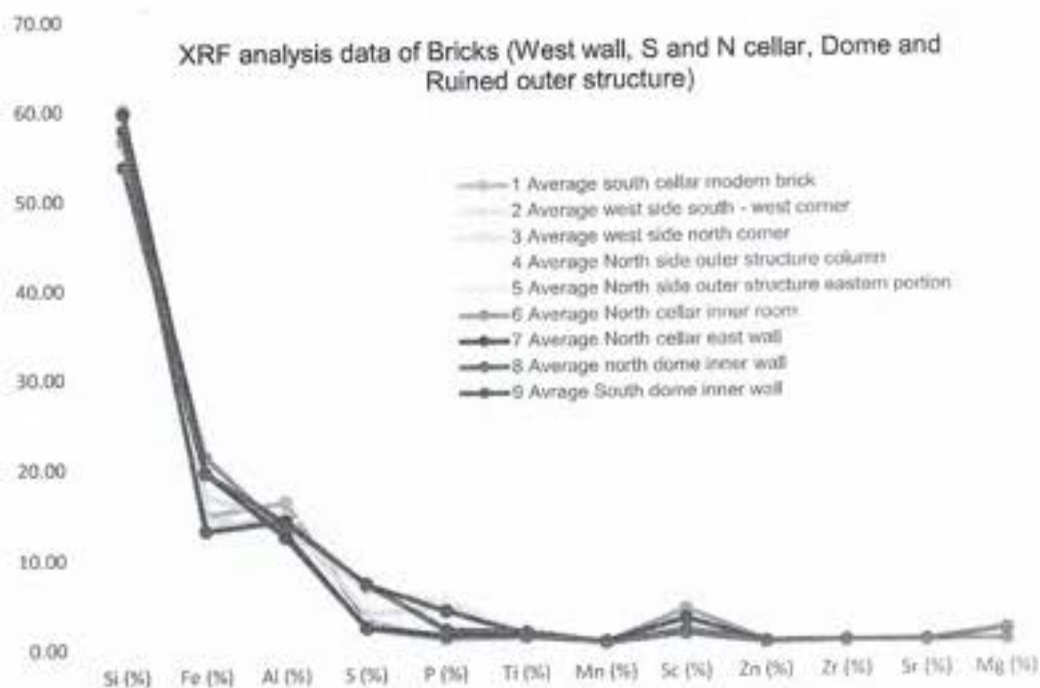
Table 21: XRF analysis data of dark coloured bricks
(south cellar, south and north dome)

Sl. No.	Location	Si (%)	Fe (%)	Al (%)	S (%)	P (%)	Ti (%)	Mn (%)	Sc (%)	Zn (%)	Zr (%)	Sr (%)	Mg (%)
1	Average south cellar west wall (dark colour bricks)	37.20	13.20	7.90	37.90	0.65	1.10	0.15	1.55	0.04	0.10	0.06	0.00
2	Average north dome inner wall (dark colour bricks)	20.85	11.40	5.05	57.60	0.00	0.50	0.15	3.75	0.03	0.09	0.05	0.00
3	South dome, inner wall (dark colour bricks)	24.95	9.85	5.30	45.70	4.00	0.40	0.15	4.45	0.03	0.09	0.06	0.00

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Graph 18: XRF analysis data of bricks (western wall, south and north cellar, Dome and ruined outer structure)

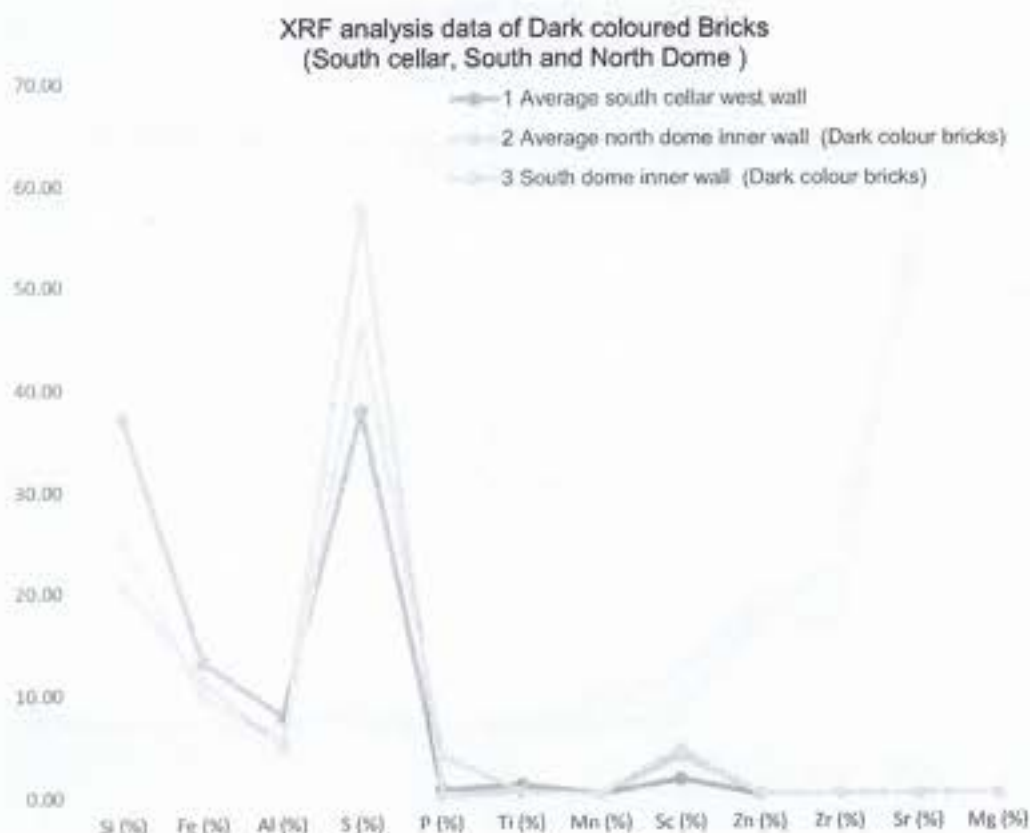


Major and minor wt% elemental composition of the bricks in the western wall, south and north cellar wall and domes of existing structure are almost similar except very slight higher iron content in north cellar. Outside ruined structure column has higher Sulfur content, may be due to various factors like Biogenic, open atmosphere, pollutants, raw material, etc.



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**Graph 19: XRF analysis data of dark coloured bricks
(south cellar, south and north dome)**



Dark colour bricks used in south and north domes of existing structure and south cellar wall has different wt% of constituent elements (lower silica and higher Sulfur content) in comparison to red coloured bricks used in other parts (western wall, north cellar, ruined outer structure) of structure. This difference may be due to different raw materials usage or they made in different place of kiln.



40417
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Ground Penetration Radar Survey

National Geophysical Research Institute (NGRI)

Hyderabad



Ground Penetration Radar Survey

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Executive Summary

The CSIR-NGRI team carried out a Ground Penetration Radar (GPR) investigation at the Settlement Plot no. 9130, Varanasi, to map stratigraphy and buried structures in the shallow subsurface soil. The salient findings are summarized below (and the details of each study are separately summarized in subsequent sections).

1. The site has three-layered stratigraphy with variable thicknesses of Layers-1 and 2. The thickness of upper Layer-1 varies from <1 to >2 m in different parts of the site. The reflectance suggests the mortar-gravel/ boulder composition. Layer-2 is highly saturated gravel with a fine matrix that extends to ~2.5-3 m depth from the surface. Layer-3 extends downward from a depth >2.5-3 m and is largely homogeneous.
2. The site description is divided into platform and cellars, corridor, halls, and western wall areas.
3. The platform area is the roof of several cellars, which are filled with Layer-2 debris with ~1 m air column at the top. This suggests a subsequent filling and settlement of Layer-2 debris.
 - a) The cellars are of two principal dimensions. The eastern side has 3-4 cellars (S1, S2, N1, N2) of ~2 m width with variable eastern wall thickness. Two rows of 3-4 m wide cellars (S3, S4, N3 and N4) are observed on the western side of the platform, adjacent to the corridor area.
 - b) The south cellars (S2) and north cellars (N2) have three ~2 m wide and ~14 m long corridors.
 - c) The south cellar (S1) is 4 m thick, where a 2 m wide corridor and well is concealed.
 - d) The concealed well within the S1 cellar is 2 m wide with an additional ~1 m wide vertical opening towards the southern side. The concealed well is



observed in intersecting W-E profile nos. 36, 37, 38, and S-N profile nos. 25 and 26.

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- e) GPR scanning of the walls of the S2 cellar from inside and outside of the S1 cellar also reveals the existence of the concealed well and corridor in the S1.
 - f) The base of the cellar S2, adjacent to the concealed well in S1, has uneven and disturbed soil columns with shallow cavities up to a depth of 3-5 m in the comparable stratigraphy to the Layer-3 level. It acts as a subsurface water flow zone.
 - g) The southwest side of the platform (adjacent to the corridor area) has several hollow or partially filled 3 m wide cellars with 3 x 3 m size compartments/ rooms separated by ~1 m thick walls (S3 and S4). These larger cellars have openings towards the southern wall, which are now sealed, as 1-2 m wide distinct patches are observed in the GPR signals. The complementary larger cellars of identical dimensions are observed towards the north side (N3 and N4), with N3 having open functional doors.
 - h) The >11 m wide area west of the sealed area has a similar character as cellars S3, S4, N3, and N4 but is less distinct due to highly saturated Layer-2 and lack of distinct air cavities.
 - i) The GPR scan of the southern outer wall confirms the presence of doors adjacent to the southern wall adjacent to the south corridor, S5, S4, and S3 cellars, concealed well in the S1 cellar, and present active well adjacent to the eastern wall.
4. The corridor area has three layered stratigraphy, with Layer-1 having variable thickness up to >1 m and Layer-2 extending down to ~3 m depth. Layer-3 remains largely undeformed, except under minars, suggesting that these are rooted in Layer-3 horizon up to a >5 m depth.
- a) The north and south minars have some internal structures, which we are unable to distinguish.
 - b) The marginal south side of the corridor area has a cellar (S5), which is complementary to the open north cellar (N5).
 - c) The door to the south cellar is covered with a wall, having a distinct EM property, as imaged in GPR.



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5. The hall areas constitute the south corridor, south hall, central hall, north hall, and north corridor.
- The three-layered stratigraphy is distinctly observed in the north hall and north corridor with >1 m thick Layer-1, which is <0.5 m in central and south halls.
 - The 3-D profile reveals invariably the Layer-1 thickness is higher towards the wall margin as fill material.
 - Layer-2 has a domal shape with a higher heap in the middle and tapering towards margins, a typical geometry of fill material.
 - Layer-3 is a largely undeformed foundation bed. The minars and foundation walls are rooted in Layer-3.
 - The basement platform (layer-3) is prominently observed at $\sim 4.5-5$ m depth under the south and central halls and a feeble signature under the north hall.
 - In the north hall, the contact between Layer-1 and Layer-2 has undulating layer, suggesting a disturbed strata/ layer probably due to the formation of sinkhole/ cavity.
 - A small sinkhole type cavity in the floor of north hall at 1-2 m depth is observed towards the northern entrance.
 - A steep and deep narrow cavity is also observed in the north hall adjacent to the central hall passage.
 - The presence of a rectangular gravel fill passage (S6), akin to a side opening/ door, towards the south, is observed at a depth of $\sim 4-6$ m at the basement level in the south corridor, marks a unique observation.
 - A similar opening at a shallower level in layer-2 down to ~ 3 m depth (N6) is observed in the north corridor, north of the north hall and west of N5 cellar.
6. The western wall area has three platforms adjacent to the individual halls. The northwest platform is filled with >2 m thick gravel, which was subsequently cleaned for a repeat GPR data generation. Additionally, the platforms on the western wall side are traversed by remnants of walls whose subsurface extension was imaged.



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270

- a) The platform on the western wall has a three-layered structure, but Layer-1 is very thin and occasionally present.
- b) The Layer-2 extends down to about ~2.5 m depth underlined by largely undeformed Layer-3.
- c) The walls of the old structures, including two arches, extend down to >4 m depth and are rooted in Layer-3.
- d) Other marginal walls are extending >4 m depth and are rooted in Layer-3.
- e) The platform with the grave in the western chamber is a shallow structure with <0.5 m depth of affected subsoil.
- f) The inclined reflections in Layer-3 are only observed in the profiles extending to the metallic compound wall, suggesting it to be the edge effect.

7. The imaging of the rooftop, including domes, involves the estimation of the thickness of the roof material and the contact with the base.

- a) The wall thickness at the base of domes varies from 25-100 cm. The north and south domes have smaller wall thicknesses in comparison to the central dome foundation, which is 100 cm thick with some variability. The zones of higher thickness in the north and south dome bases represent the wall on which the domes are erected.
- b) The roof layer is ~0.5 m thick, and the walls and hall cavity are well observed in different profiles.

The observations and findings are summarized over the map layout of the site (Fig. 1). The detailed observations and inferences are presented in subsequent sections with some of the characteristic GPR figures. The part of data acquisition and interpretation maps are repeatedly used for specific contexts.

All the processed images (without interpretation) and interpretation images are provided in digital format only.



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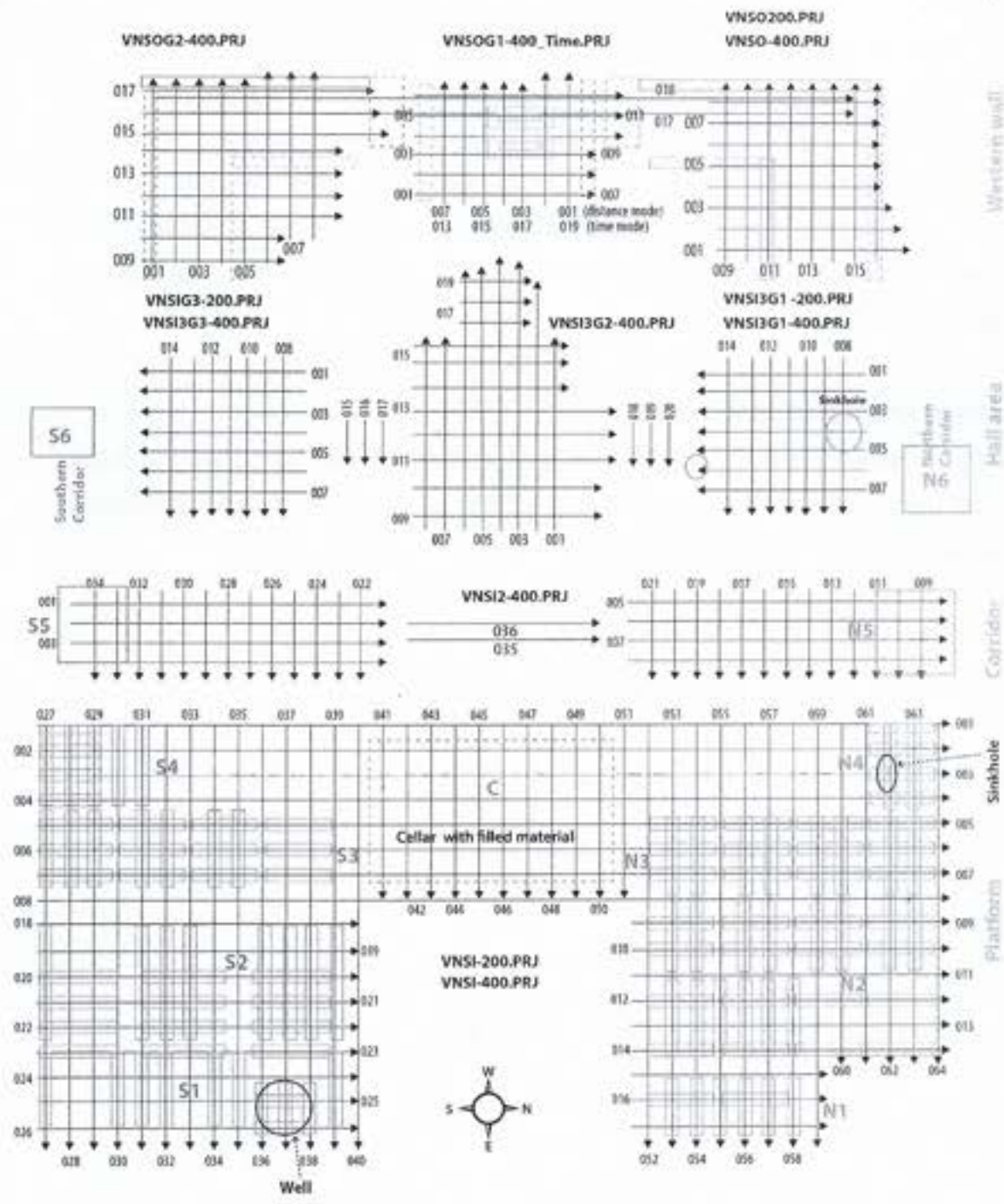


Figure 1: New observations at the Settlement Plot no. 9130 using GPR. The New interpretations are marked in blue boxes. The solid line is definite and the dashed line marks the suggested interpretation. (VNSI—is file name series suffixed by GPR antenna type)



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Background

A proposal to carry out the Ground Penetration Radar (GPR) survey at the Settlement Plot no. 9130, Varanasi, dated 17.08.2023, was submitted on request from the Archaeological Survey of India, New Delhi (Government of India). The proposal was sanctioned by the Department and work was started at the site. Care was taken to maintain the necessary confidentiality of this survey work, considering the matter's sensitivity.

Objectives and Scope of the Work

Mapping of shallow subsurface at the survey at the Settlement Plot no. 9130, Varanasi using Ground Penetration Radar (GPR) to identify buried archaeological structures and their disposition.



Introduction

A six-member team of CSIR-National Geophysical Research Institute (NGRI) moved to the site on 20.8.2023 and carried out the GPR data acquisition at the Settlement Plot no. 9130, Varanasi, until 26.08.2023. After preliminary interpretations and short draft reports on the progress of work, the CSIR-NGRI team revisited for some additional data acquisition, site verification of the preliminary interpretation, and discussion at the site with the ASI team from 20-23 October 2023.

CSIR-NGRI team has generated GPR data along more than 800 (small and large) profiles using GSSI-make 200 MHz, 400 MHz, and 900 MHz GPR antennae at the Settlement Plot no. 9130, Varanasi (Fig. 2-5). The GPR data have been processed using Radan-7 software. The GPR data have been interpreted for meaningful results in discussion with the ASI team and ground verification. All the processed data in the form of profile images in *.jpg format and interpreted and annotated profiles are attached in Annexure-1 and Annexure-2, respectively.

The final report constitutes the findings from the site. The results are summarized in the following subsections:

1. Methodology
2. Stratigraphy of the site
3. Platform area
 - a. Cellar and outer south and east walls
4. Corridor area
5. Halls and side corridors
6. Western wall
7. Rooftop



Plot No. 9130 VNS

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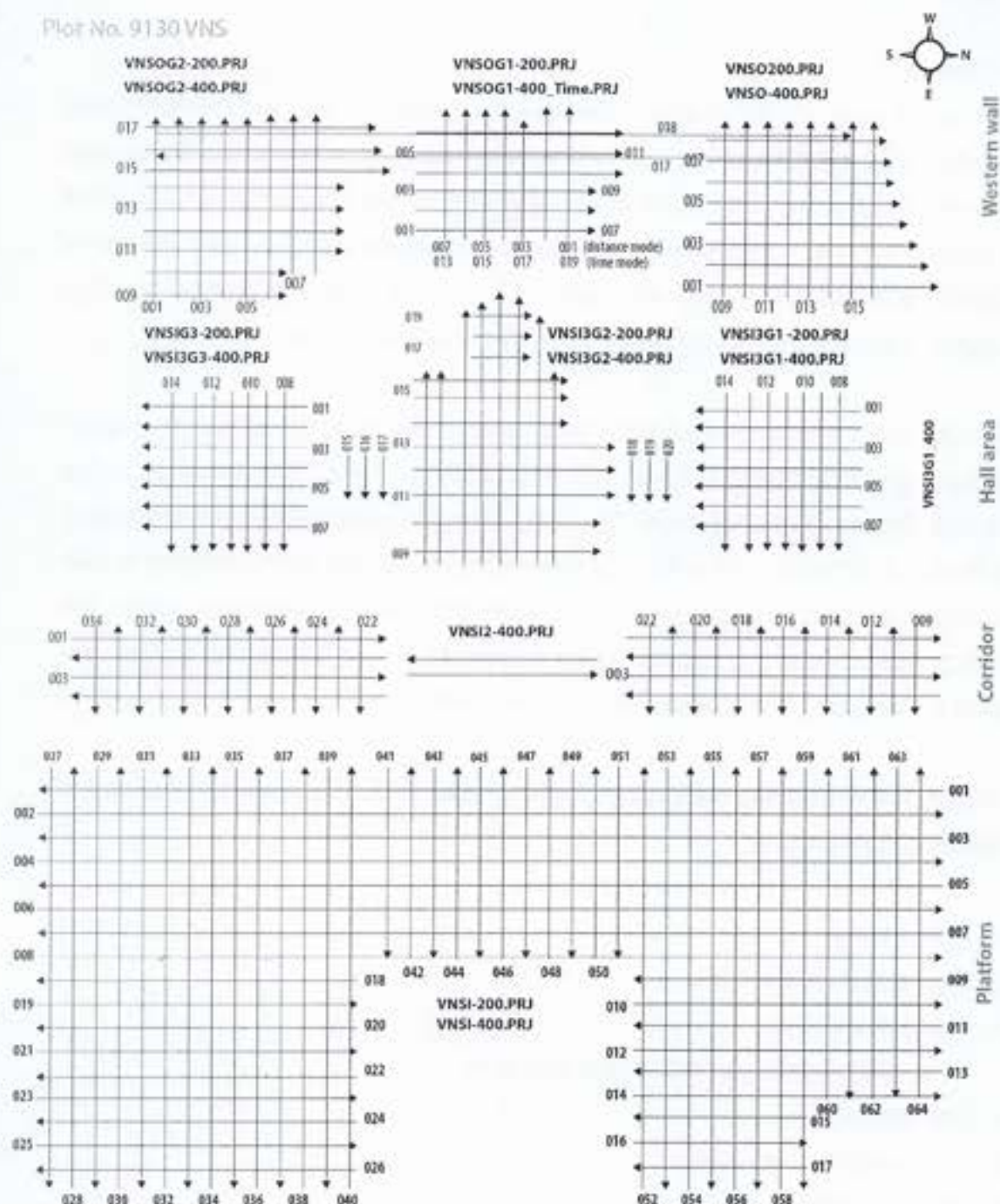


Figure 2: Map of the GPR data acquisition layout using 200 MHz and 400 MHz antennas.



plot_9130_vns

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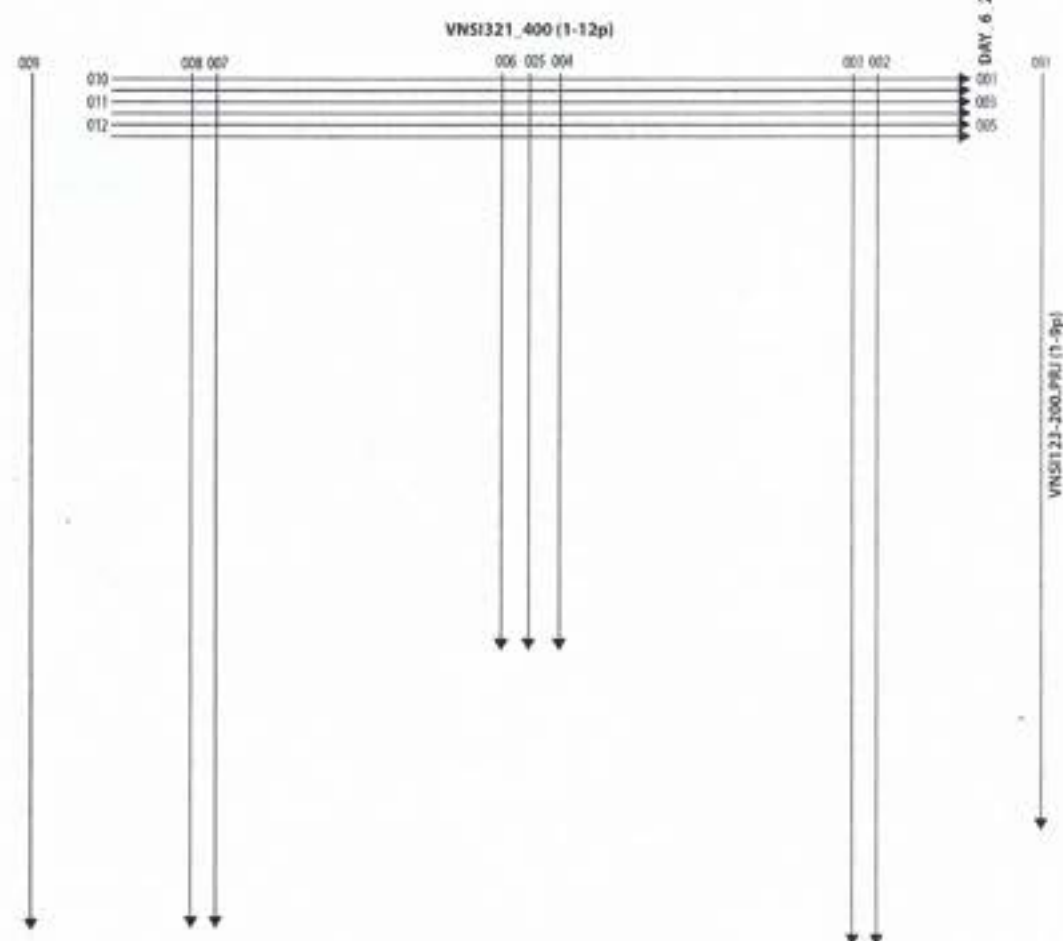


Figure 3: Layout plan for GPR long profiles across the halls, side corridor, corridor and platform areas.



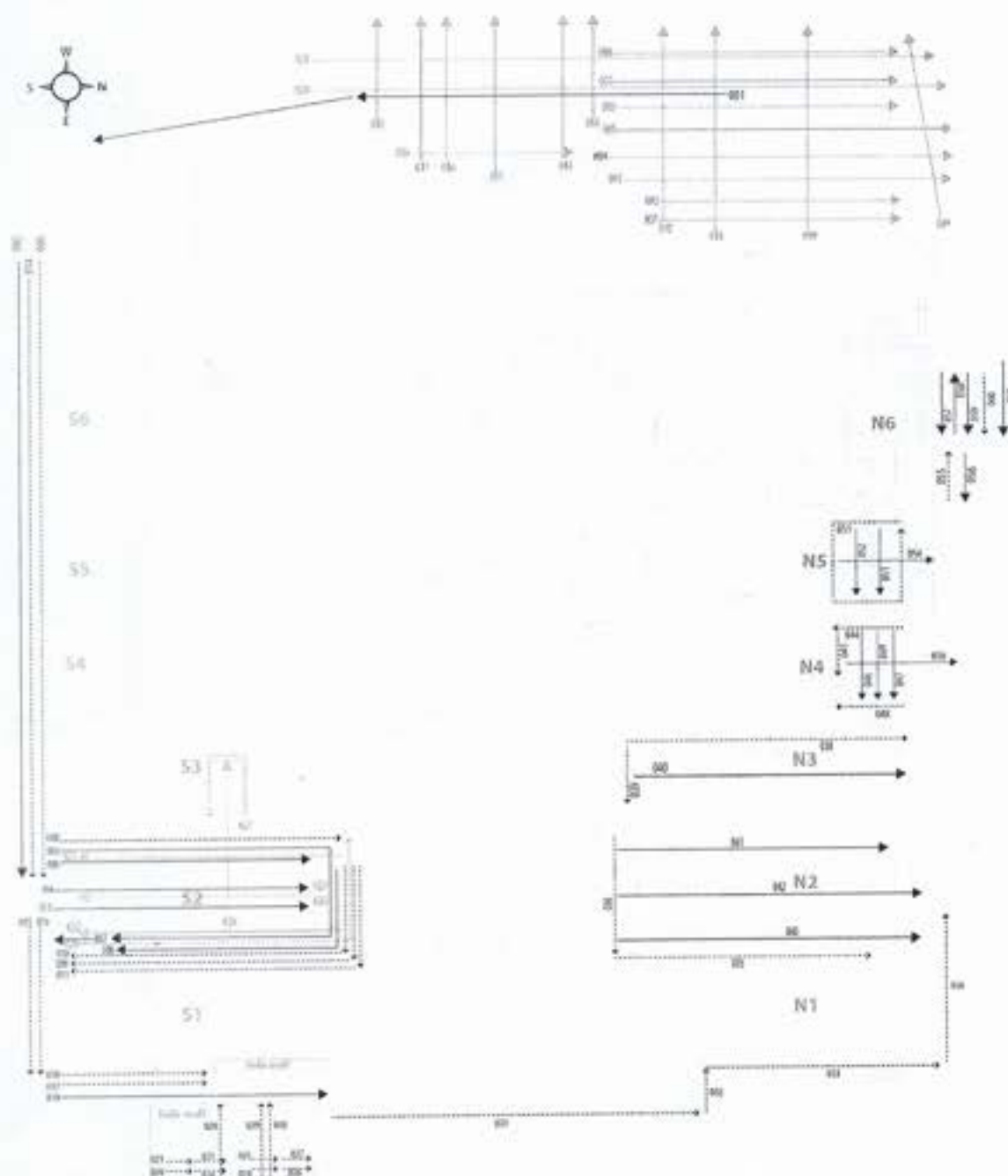


Figure 4: Map of GPR data layout plan for cellars and walls. Please note the additional data acquired in the western wall and cellar S1 and S2 after debris removal is marked in red. The data layouts are acquired by 400 MHz and/ or 900 MHz antenna in time mode and therefore distance conversion is an approximation.



40417
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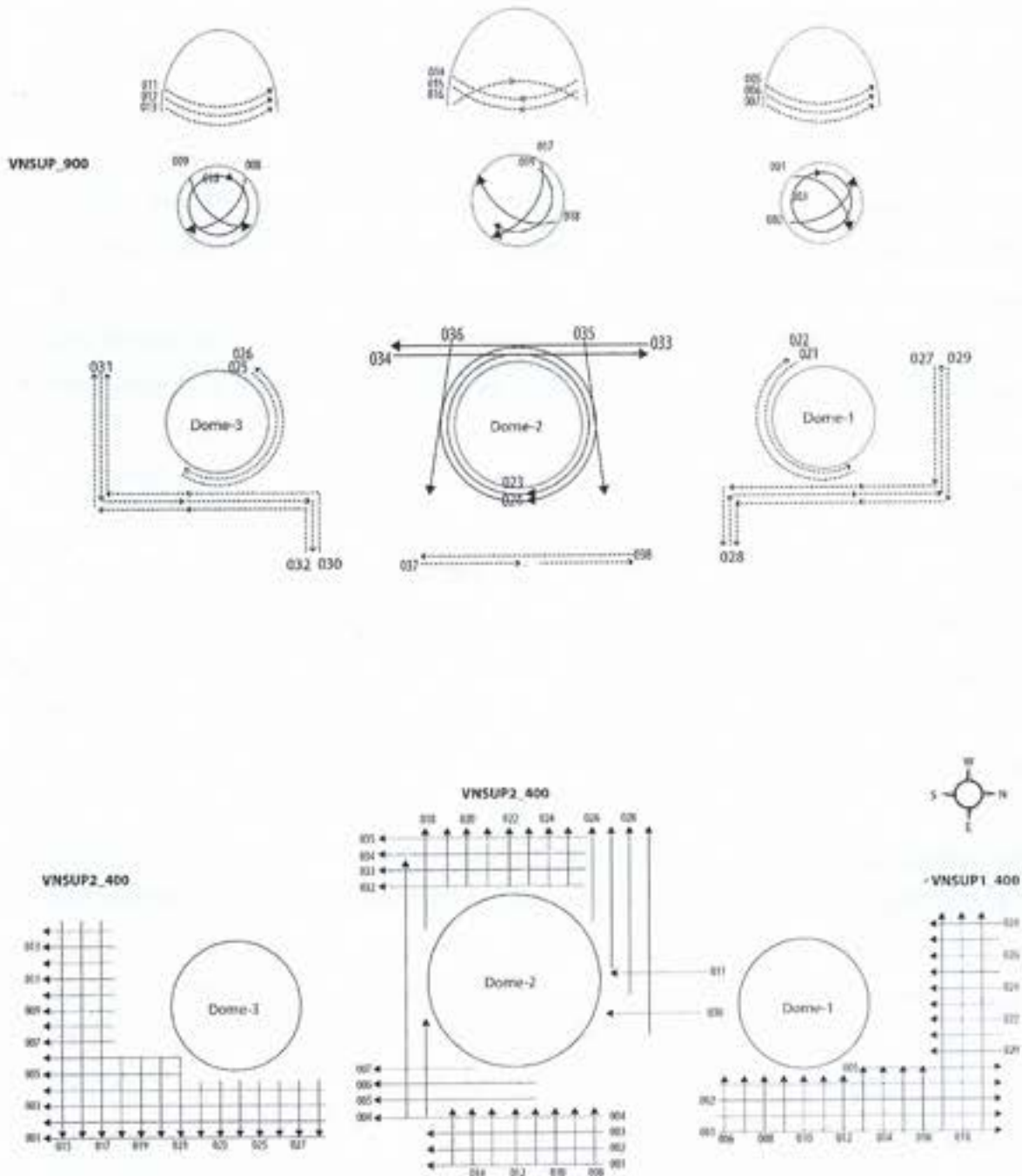


Figure 5: The GPR data acquisition plan at the rooftop using 400 MHz and 900 MHz antennae. 900 MHz antenna data is time mode and therefore, distance conversion is an approximation.



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1. Methodology

GPR Data Acquisition and Processing

GPR survey is a portable non-destructive electromagnetic (EM) method that produces high-resolution subsurface images. The real-time output of the scan gives preliminary information that can be used to change parameters and survey design during the survey. GPR uses high-frequency EM energy to transmit discrete pulses, lasting for several nanoseconds, and receive the reflected signal (Neal, 2004). A series of 1-D data is stacked to form a profile producing a cross-sectional image based on the propagation, reflection, and scattering of EM waves. The path of the EM signal through the ground can be traced as a ray at geological and structural discontinuities with contrasting dielectric constant, which depends on the soil/ rock properties such as grain size, water content, porosity, etc. The method is successfully used worldwide to locate subsurface structural features such as caves, fractures, shear zones, and groundwater potential zones (Collins, 1994; Benson, 1999; Martinez 1998; Jol, 2009; Anthony, 2010; Carrière, 2013; Gómez-Ortiz, 2013; Pandey et al., 2019). The EM wave frequencies in GPR range from 10 MHz to 2.4 GHz and the smaller frequency offers greater penetration depth and vice versa (Martinez 1998; Neal, 2004; Lynda Driad-Lebeau, 2008).

At the Settlement Plot no. 9130, Varanasi, the GPR data was acquired using GSSI SIR 4000 GPR system with four different central frequency antennae, namely 100 MHz, 200 MHz, 400 MHz, and 900 MHz, to map the shallow subsurface structures up to a depth of 5-10 m from the data acquisition level. Data was acquired in the continuous mode namely distance mode and time mode. The 100 MHz antennae have lower spatial resolution with higher depth signal penetration up to ~15 m, 200 MHz antennae depth signal penetration up to ~10 m, 400 MHz antennae depth signal penetration up to ~6 m whereas the 900 MHz provides high resolution with shallow depth (~2 m) information.



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Table-1

Sl. No.	Antennae Type	Depth	Place of use
1	200 MHz	8-10 m	Platform, cellars, corridor, hall area, roof top area, well area and western wall
2	400 MHz	4-6 m	Platform, cellars, corridor, hall area, roof top area, and western wall
3	900 MHz	1-2 m	Roof top area, dome area and halls
4	100 MHz	10-15 m	Platform area and outside, but did not use the data as it had some acquisition issue.

 200 MHz	 400 MHz	 900 MHz
 100 MHz	 Control unit	

GPR antennae types and control unit used for present study

The survey required a priory dielectric constant of the upper surface where the GPR was placed. The resolution of the image is directly proportional to the frequency, i.e. a high-resolution image for shallow depth requires high-frequency waves. The



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penetration depth of the transmitted waves can be determined from the equation below

$$D = ct/\sqrt{Er}$$

where D is the depth of penetration (m), c is the velocity of light in free space, the wave travel time (nanosecond), and Er is the dielectric constant. The image derived from the anomalies in the reflection/ saturation of reflected EM signals (Fig. 6) in the GPR sections are used to identify the cracks/ fissures, water saturation, and other subsurface features.

The data collection was carried out at 177 scans/ sec and 100 scans/ unit on a horizontal scale and 511 samples/ scan and 32 bits/ sec on a vertical scale. We used the conventional frequency setting while acquiring data, whose high-pass was 1/6th

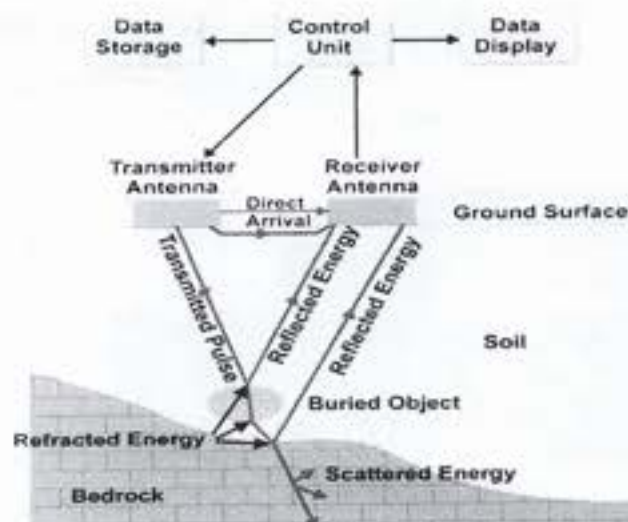


Figure 6: Schematic diagram showing GPR data acquisition.

the antenna frequency and whose low-pass would be higher than the antenna frequency. The dielectric value of the upper layer (relative permittivity of asphalt was equal to 6.0) was assigned, which estimated the maximum depth of penetration to be equal to ~15 m. The field data was processed using Radan-7 software with the following steps, viz. time zero correction, background removal, finite impulse response (FIR), gain, stretching, and signal floor. The time zero correction function was applied to the raw data to detect the ground wave peak positions followed by the elimination of the portion above the traces using time shift to bring initial data to the exact ground surface. Background removal was applied to remove all the



horizontal coherent noises using pass background removal.

To increase the signal-noise ratio, low-pass ($= 80/200$ MHz) and high-pass ($= 5/10$ MHz) filters were applied. The values of filters were decided by the frequency spectrum of the neighborhood region including the spectrum peak. Exponential gain ($\text{max} = 5$) with depth was applied to reduce the fluctuation of the amplitude of traces, which was reduced with depth. Horizontal stretching was applied to transfer the profile to its original scale. The processed data is reliable up to a certain depth, which is given by the signal floor. The futile data below the signal floor can be clipped from profiles displayed after final processing.

The radar reflection configurations were observed in terms of shape and inclination of reflection, the relationship between reflections, and reflection continuity. The amplitude of the reflected signal is an important characteristic, mainly in the subsurface fracture/ discontinuities/ utilities/ underground debris/ old workings detection as the dielectric constant being shows high contrast in the image, and the shape depends on the discontinuous reflector geometry.

Limitations of the GPR Survey

The penetration depth of GPR is primarily controlled by three factors.

- i) the frequency of the antenna
- ii) the electrical conductivity, and
- iii) Type of subsurface material

As the frequency of the antenna increases the depth of penetration decreases. Higher frequencies do not penetrate as far as lower frequencies but give better resolution. The literature on GPR investigations in sediment reports penetration depths of about 30-40 m for 40-50 MHz, >10 m for 100 MHz, 8-10 m for 200 MHz, and a few meters for 500-1000 MHz.

The electrical conductivity of the ground/ soil increases and the penetration depth of the GPR signal decreases, owing to the dissipation of electromagnetic energy into heat through electrical conduction losses, dielectric relaxation losses in water, and chemical diffusion in clay materials, causing a loss in signal strength at depth. In low-



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conductive materials, the signal is attenuated very slowly, whereas in conductive materials such as clay or deposits with saline water, the attenuation is very fast and the penetration depth is decreased significantly.

The dielectric properties of the objects/ materials or soil column. If the dielectric properties of the soil and that of the target material are the same, then the EM energy simply passes through the target material without any reflection. As the contrast between the dielectric properties of the targets and those of the medium increases, the GPR system works more effectively.

Any metal objects or construction materials present in the neighbourhood of the antenna while recording, the reflections from that object can also be reflected in the original GPR data. These side reflections are predominant if we are using the high-frequency antenna for data collection.

Broad Interpretation Tool

The User Manual containing details of equipment, software, processing technique and broad interpretation tools for archaeological sites are attached as Annexure-III.

Some basic processing and interpretation tools used in present study

- The processed signal strength of the GPR data is presented in coloured format and uniformly used for all the data.
- The presence of hyperbola and its extent in the signal represent discontinuity and forms an important criterion for the interpretation of GPR data.
- The white and bright grey color suggest low signal attenuation and usually represents the air column and cavity.
- The reddish and black colour represent a high degree of water saturation that causes high signal attenuation and reduces the depth of penetration of the GPR signal.
- Variegated bright colour suggests signal scattering and the presence of inhomogeneous lithology of highly variable grain size, such as boulders in the fine matrix.



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2. Stratigraphy

The area has been investigated with four GPR antennas, but for major interpretation of subsurface structure and lithology is based on the findings of 200 and 400 MHz antennae. It is essential to understand the stratigraphy of the site to explore the subsurface archaeological structure based on the dielectric contrast and cross-cutting relationships of litho-units. The spectral images along the profiles are generated from the processed GPR data and are attached in Annexure-1 and Annexure-2 for all the profiles and some representative profile images from different areas of the site (Fig. 7) are used for description here. The eight profiles, four each in N-S and W-E directions, covering the area are presented (Fig. 8-9).

The site has three-layered stratigraphy with variable thicknesses.

- The top Layer-1 has variable thickness with thickness varying from <1 to >2 m in different parts of the site and is primarily constituted of mortar/ boulder composition. The Layer-1 shows variegated bright colours suggesting inhomogeneous lithology constituted of boulder and fine-grained mortar and lack stratification.
- Layer-2 is highly saturated gravel with a fine matrix that extends to ~ 2.5 -3 m depth from the surface with bright red and black reflectance. The black color suggests high saturation. Layer-2 is ubiquitously observed in all the buried structures, forming the fill material (Fig. 8-9). Layer-2 has a lower bed thickness towards the eastern side under the platform area due to air cavities in the buried cellars (Fig. 9).
- Layer 3 extending downward from a depth >2.5 -3 m forms the largely undisturbed base horizon in which all the structures are rooted (Fig. 8). The walls, and minars of the foundation of structures are observed to pierce to a depth >5 m. The foundational platform is observed at ~ 4.5 -5 m depth under halls and south corridor in Layer 3 (Fig. 9).



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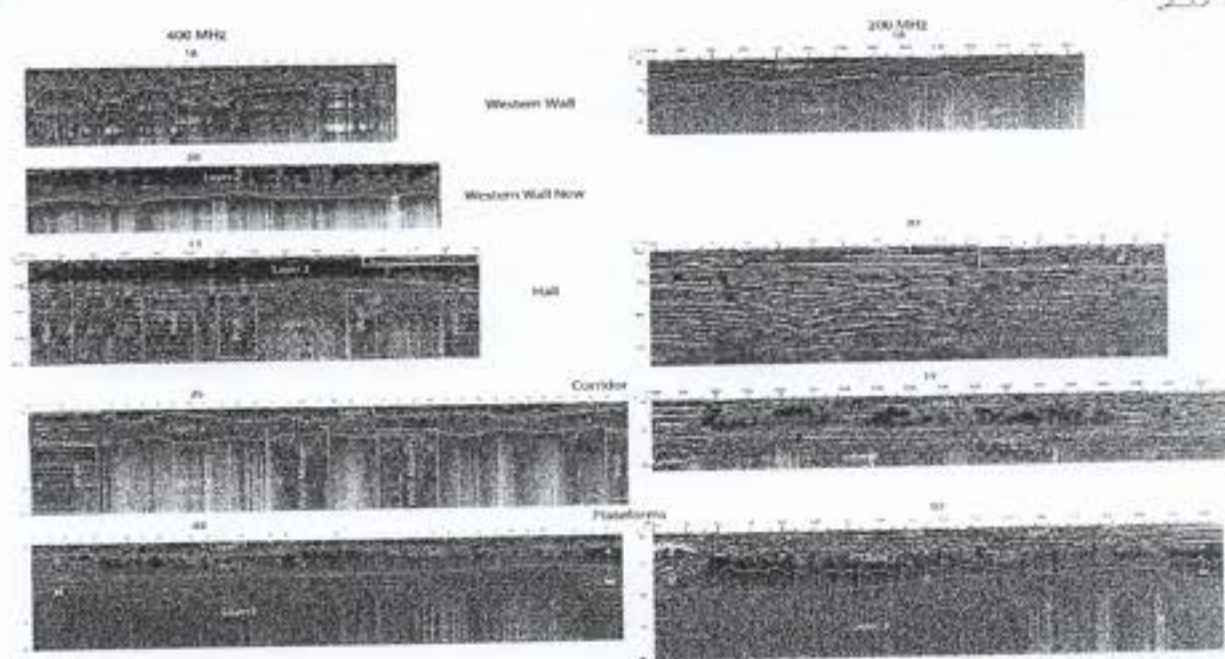


Fig. 8: S-N profiles covering western wall, hall area, corridor, and platform

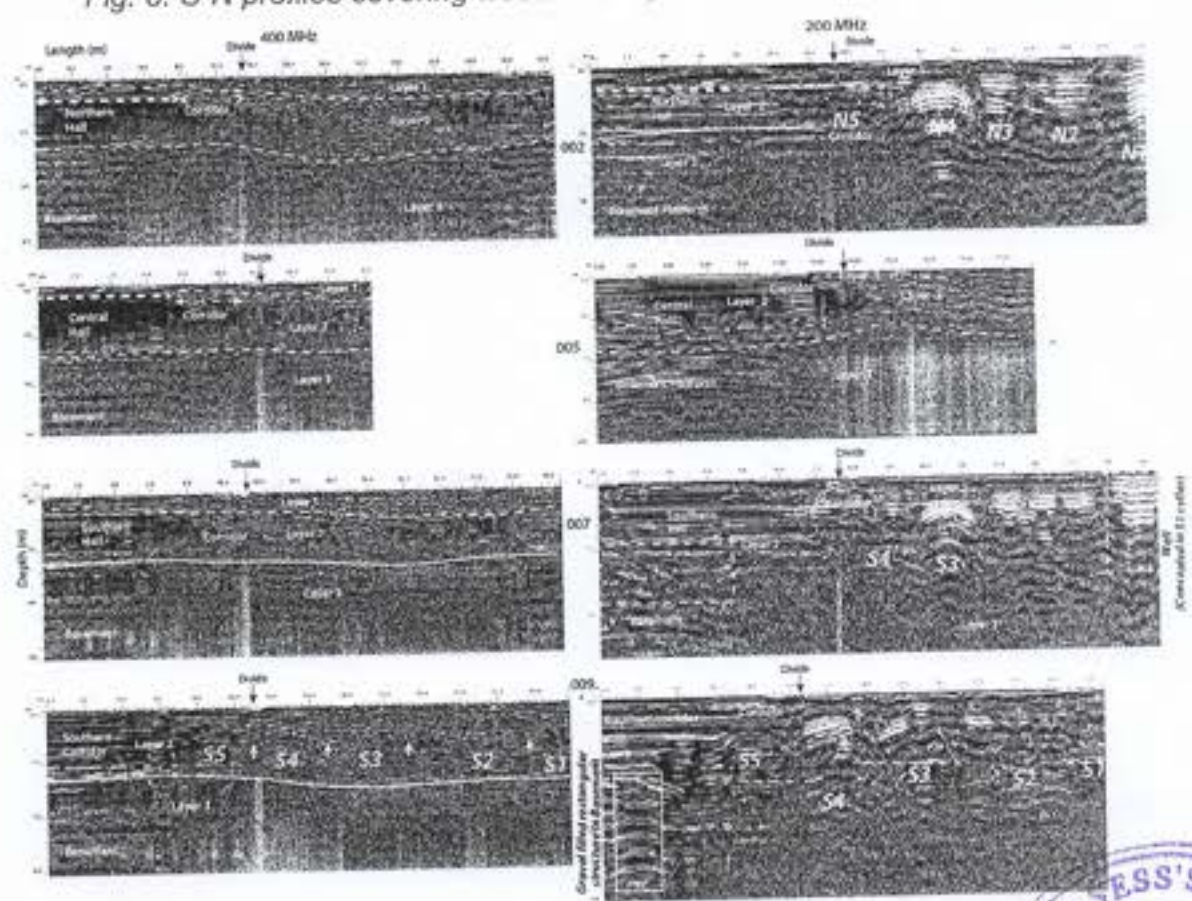


Fig. 9: W-E profiles covering hall area, corridor, and platform.
Please refer to other profiles in Annexure -1 and 2.



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3. Platform Area

In the platform area 64 GPR profiles at one-meter grid intervals were taken using 400 and 200 MHz antennae each (Fig.1). Profile no. 001 to 026 are running in the south-north direction and profile no 027 onward are running across west- east direction (Fig. 10). The same profile surveying direction and nomenclature are followed for both the antenna. Later, profiles in alternate direction are flipped to make it a homogeneous presentation from left (south) to right (north) and top (west) to bottom (east) (Fig. 10). This configuration is presented in the result sections as Annexure-I and Annexure-II.

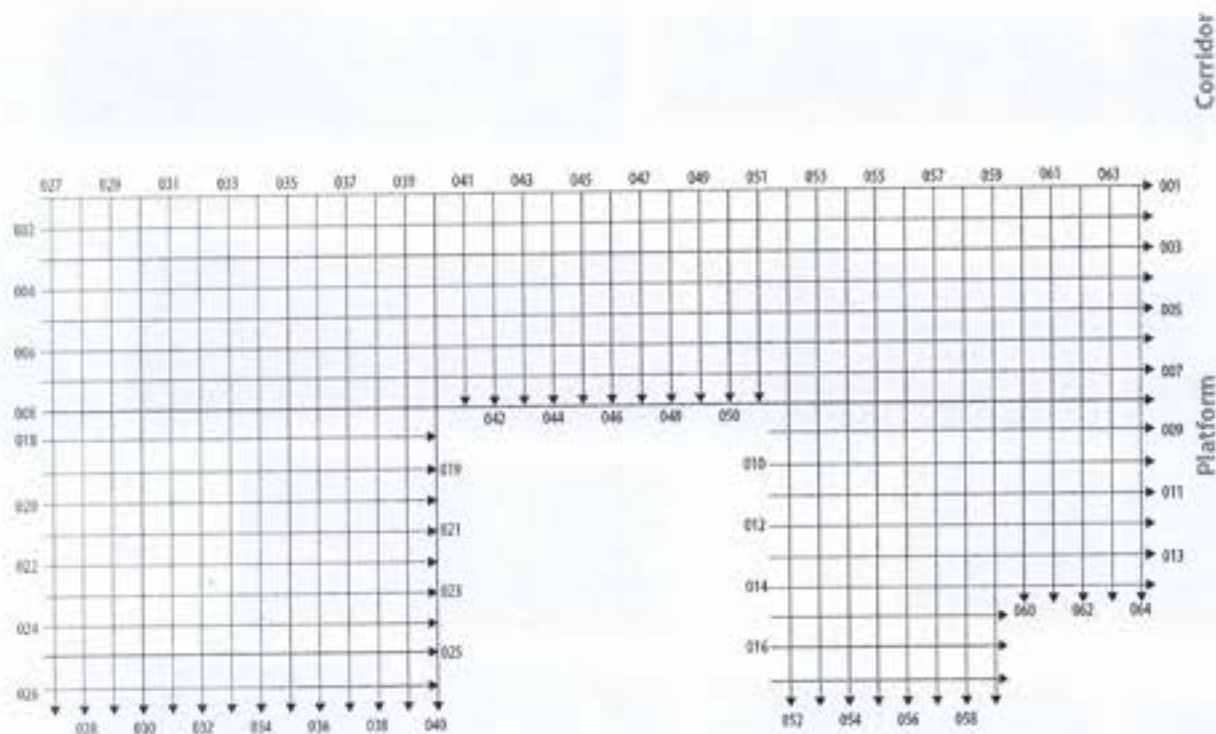


Figure 10: GPR profiles in the platform area. The profiles are flipped to represent the data homogeneity, i.e. south to north and west to east.

The three-layered stratigraphy is identified across the platform profile (Fig. 11-13, Annexure 2). The layer consisting top ~1 m, represents the flooring of the platform (Layer-1). Layer-2 consists of saturated gravels with a fine matrix, which is physically verified in the cellar S2 and S3, and extends down to ~3 m. The basement Layer-3 continued beyond 5 meters of depth. The cellars S2 and N2, N3, and N4 are exposed and form the validation examples for the GPR signals.



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The platform area is developed over several 3x4 m long hyperbolas with bright reflectance in the top 1-2 m (Fig. 11-13). These cellars with air cavities are very well reflected in the GPR profiles and form the basis for defining the dimensions of the buried cellars towards the southern part of the platform area, namely S1, S3, S4, and S5. The 3D image of the southern part of the platform (Fig. 11) provides a composite picture, which is explored in characteristic profiles in the following section.

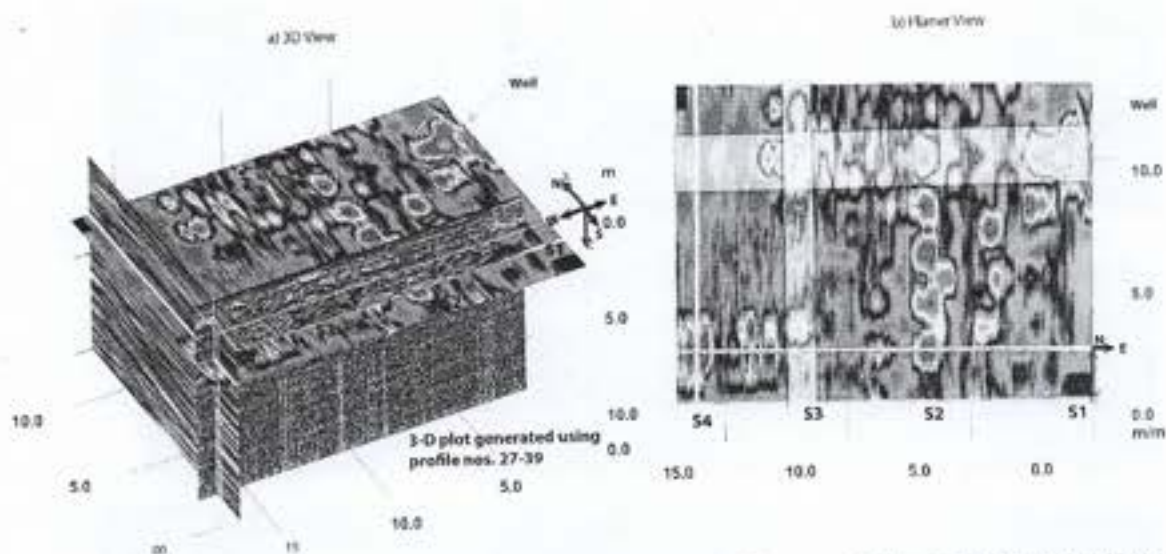


Figure 11: 3D profile of the southern part of the platform area. Please note the cellars in the southern platform and 'well' in the concealed cellar S1 towards the eastern margin.

The hyperbola in the S-N profile (1-7) towards the western side of the platform area (Fig. 12) reveals a series of identical cellars with 3 m wide compartments/ rooms separated by walls on the north (N3) and south sides (S3) of the platform. These cellars are filled with saturated Layer-2 gravels and air cavities towards the upper part.

The central part of the platform, situated west of the "sealed area", also has a top 1-2 m hollow cavity followed downward by a highly saturated Layer-2 gravel fill suggesting the extension of S3-N3 type cellar (or long hall). Though there are hyperbolic reflectors in the central area of the platform (Fig. 12, profile 5 – 200 MHz), it is difficult to differentiate the size of compartments/ rooms, and intervening wall separation is not well differentiated due to the very high saturation of the gravel, which attenuates the signal and reduces the resolution.



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The W-E trending GPR profiles (no. 037-040; Fig. 13) clearly show stratigraphy and hyperbola reflection identifies two ~3 m wide cellars separated by walls (S4 and S3), three 2 m wide cellars (S2) and buried cellar with concealed well in the sealed S1 cellar are identified. The concealed well is extending down to >8 m depth is visible in profile no. 37 and 38 but absent in 39-40, suggesting ~2-3 m width of the well.

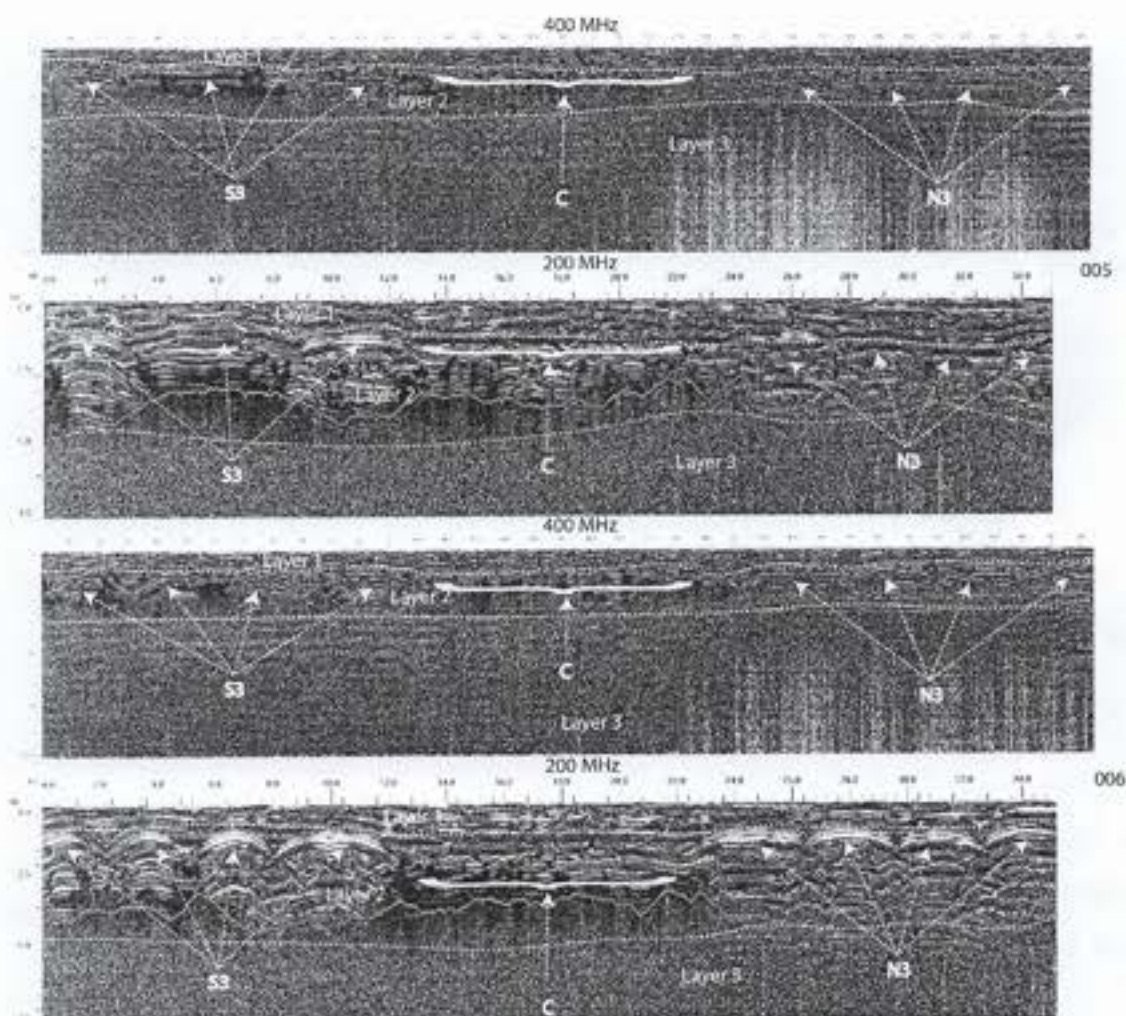


Figure 12: S-N trending GPR profiles (no. 005 and 006) clearly show three layers stratigraphy and four ~3 m wide compartments/ rooms separated by walls as hyperbola reflection identified as the south (S3) and north (N3) cellar, respectively.



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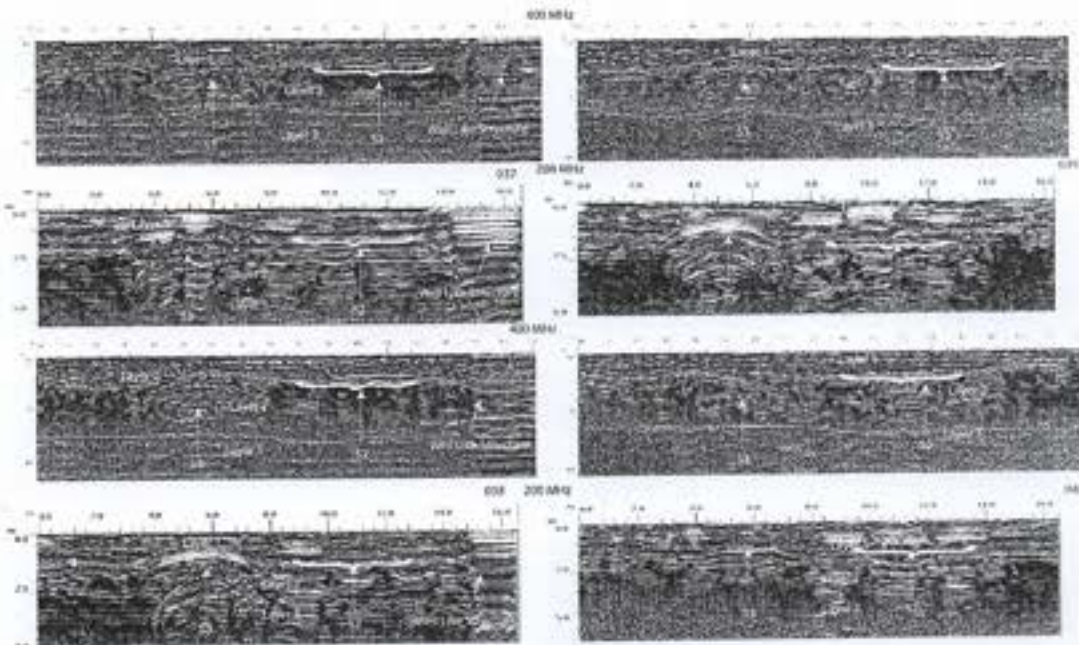


Figure 13: W-E trending GPR profiles (no. 037-040) clearly identifying two ~3 m wide cellars S4 and S3 (hyperbola reflection) separated by walls, three 2 m wide cellars (S2) and concealed well in the sealed S1 cellar. Please note >8 m deep well is only observed in profile no. 37 and 38 suggesting its ~2-3 m width.

We generated additional 3-D GPR data with 0.5 m grid spacing of the 'well' area to understand better details (Fig. 14). At the intersection of profile no. 25-26 and 36-28 a bright reflector, with less data attenuation, is observed extending beyond 6 meters of depth (Fig. 14). This suggests the presence of a typical well-like cavity of 2.5 x 2.5 m dimension.

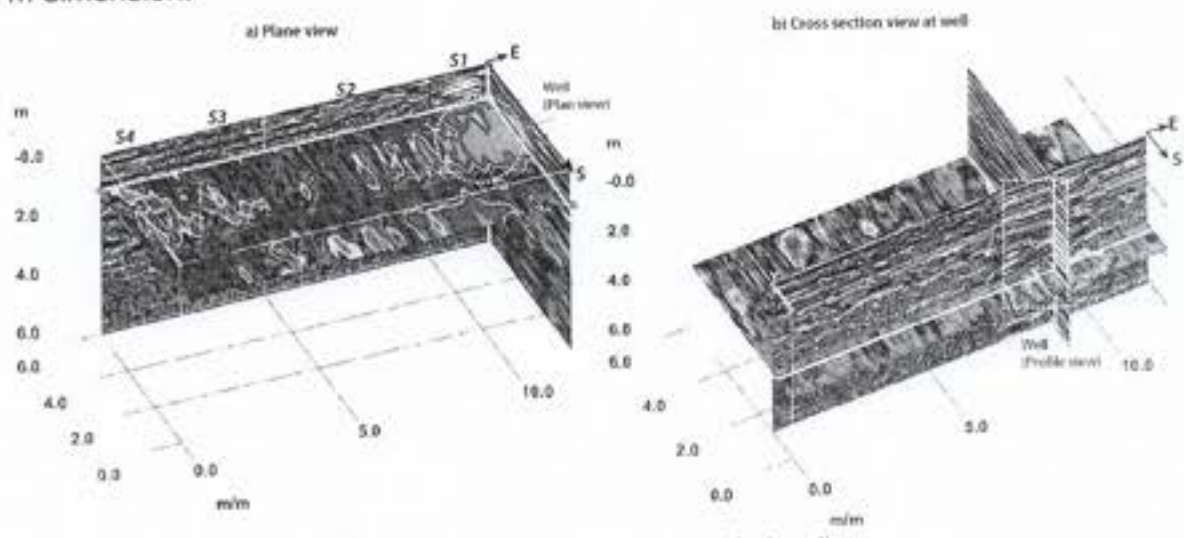


Figure 14: 3D profile of the concealed well zone.



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The detailed profile confirms the 3 x 2 m well dimension in the S-N and EW directions (Fig. 15).

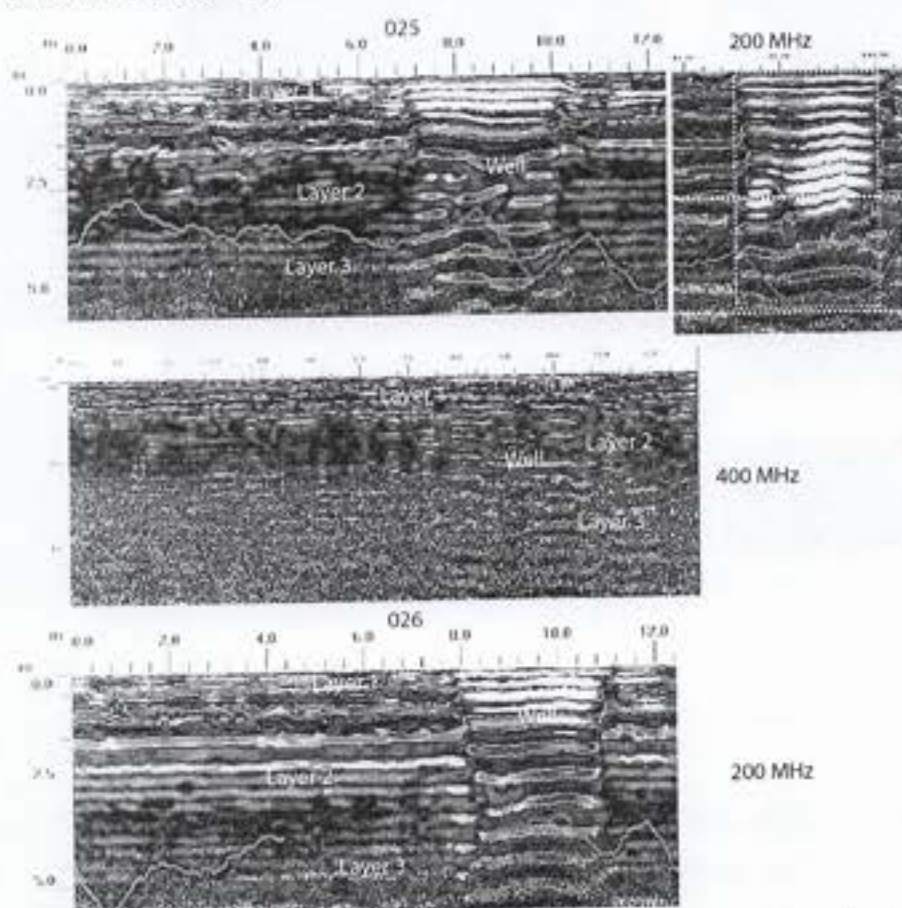


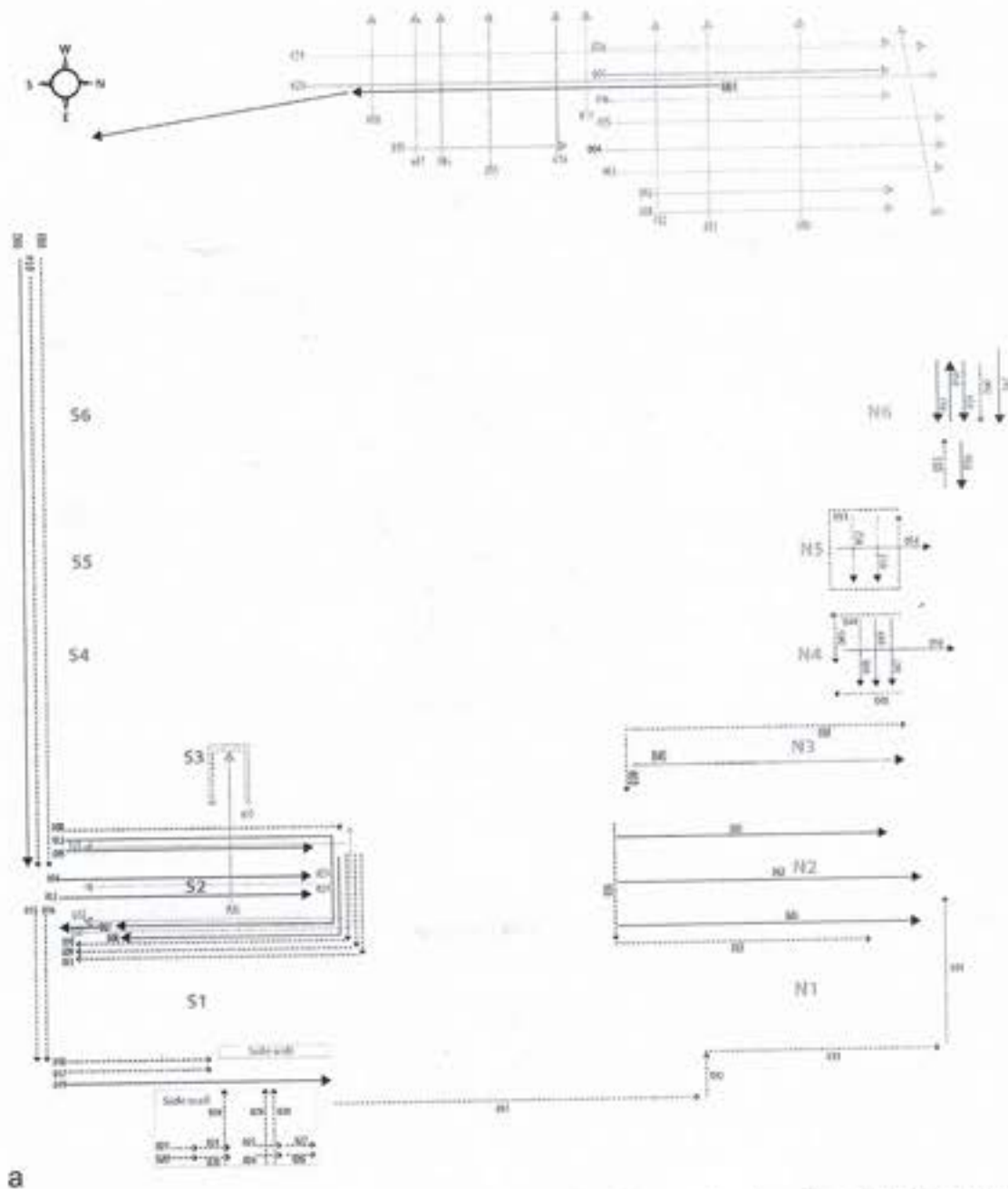
Figure 15: S-N profile (no. 025-026) over 4 m thick south cellar S1 having >8 m deep concealed well and cellar.



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Cellar Areas, South and East Walls

61 GPR profiles were taken in the open cellars (S2, N2, N3, N4 and N5) region and on the wall to target buried or concealed wells, doors, and cellar extensions in the basement (Fig. 16). The Solid line represents the profile on the ground surface and dash-line represents the profile on the walls. The black line represents the profiles taken during August 2023 and the red line represents the data acquired during October 2023.



a
Figure 16: GPR profiles in the S2, S3, N2, N3, N4, N5 cellars and outer walls and gallery floor adjoining platform area.



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All the data profiles are acquired in the time mode and the distance of the profile is assigned through manual measurements. The distance accuracy in the final profile depends on the variation of the speed of the antenna movement and hence is an approximation. Profile 001, 002, and 019 were taken on the ground in the periphery region. Profile no. 004 to 014 were acquired from cellar S2, profile 035 to 043 from cellars N2 and N3, profile 044 to 050 from N4 and profile 051 to 054 from N5.

The GPR profile no. 022, 023, 025, and 026 are acquired on the floor of the S2 cellar (Fig. 17). The profile clearly shows the presence of a subsurface cavity and subsidence zones adjacent to the concealed well in cellar S1.

Profile no. 003 and 014 were taken on the southern wall of the structure in the upper and lower portion, respectively. Hall area, corridor, and platform areas are clearly differentiated by the distinguished nature of material reflection in the 003 and 014 profiles (Fig. 18). Cellar area and cavities are clearly marked by the void signals through Layer-2.

The profile no. 008 on the west wall of cellar S2 shows four distinguished concealed doors opening towards cellar S3 (Fig. 3). Similarly, in profiles no. 009-011 door opening towards cellar S1 is well observed (Fig. 18a).

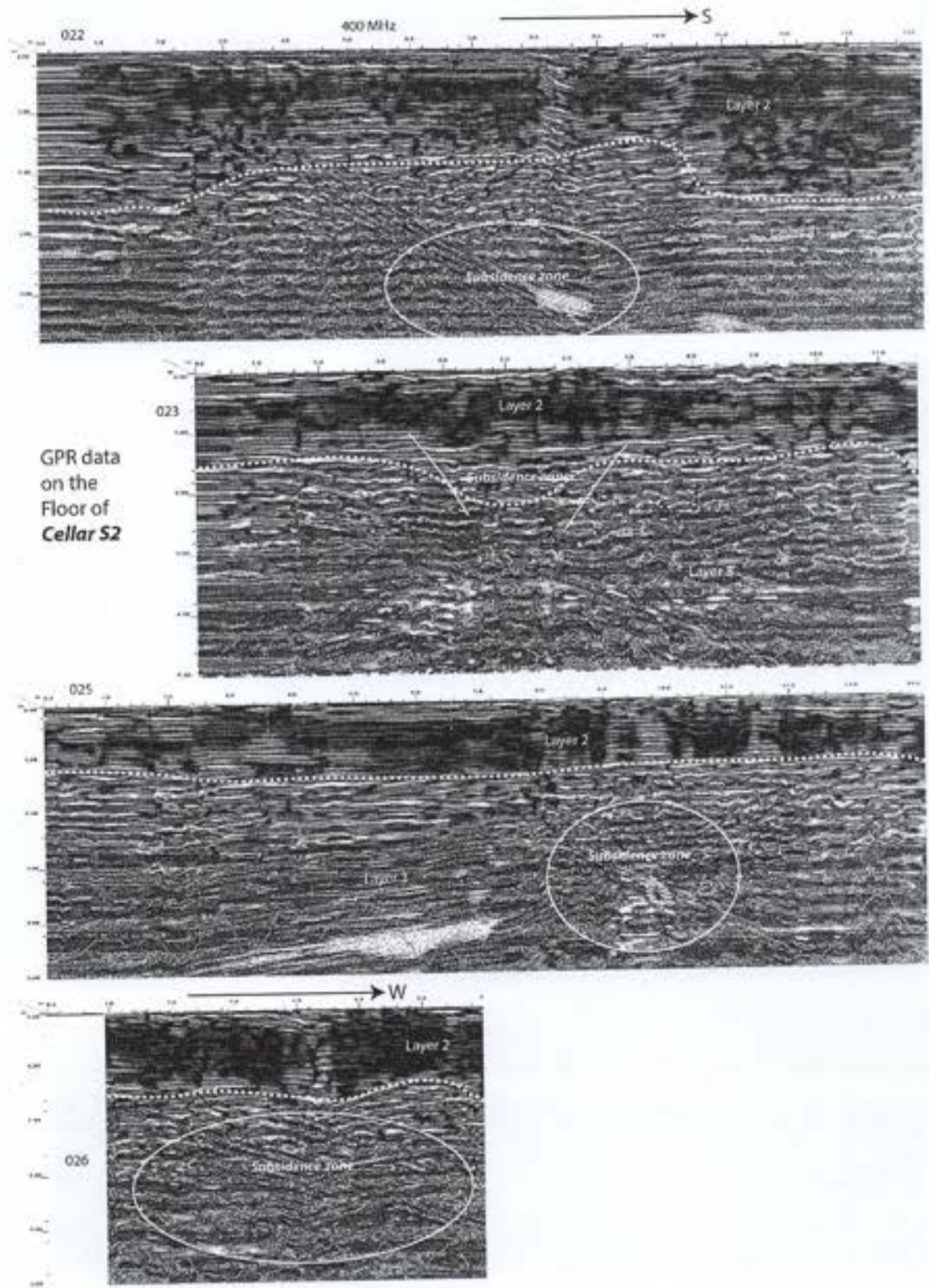
The cellar S1 signatures are clearly seen in the GPR profile no. 015-017, which were acquired on the southern and eastern outside walls of the cellar S1 (Fig. 19). Some portions of the layers are saturated with moisture in the concealed cellar S1.

Profile no. 031 to 034, taken on the eastern and northern outside wall, and N1 cellar (Fig. 19). The 'well' signature is also observed in the profiles 031 and 032. The cavity of cellar N1 is observed in the profile no 033 and 034 (Fig. 20).

Profile no. 035-036, 038-039 were taken on the inside wall of the cellar N2 and N3 (Fig. 16). The N4 and N1 cellar signatures are observed in the GPR profile no. 038 and 035, respectively.



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GPR data
on the
Floor of
Cellar S2

Figure 17: GPR profile on the floor of cellar S2 showing subsidence zone
in line with the concealed well.



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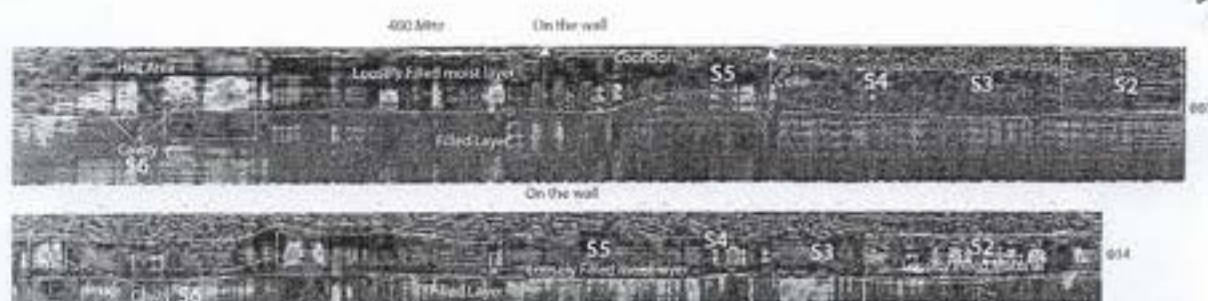


Figure 18: Upper (003) and Lower (014) profiles on the southern wall.
Note the bright reflectors indicate cavities across doors and wall openings.

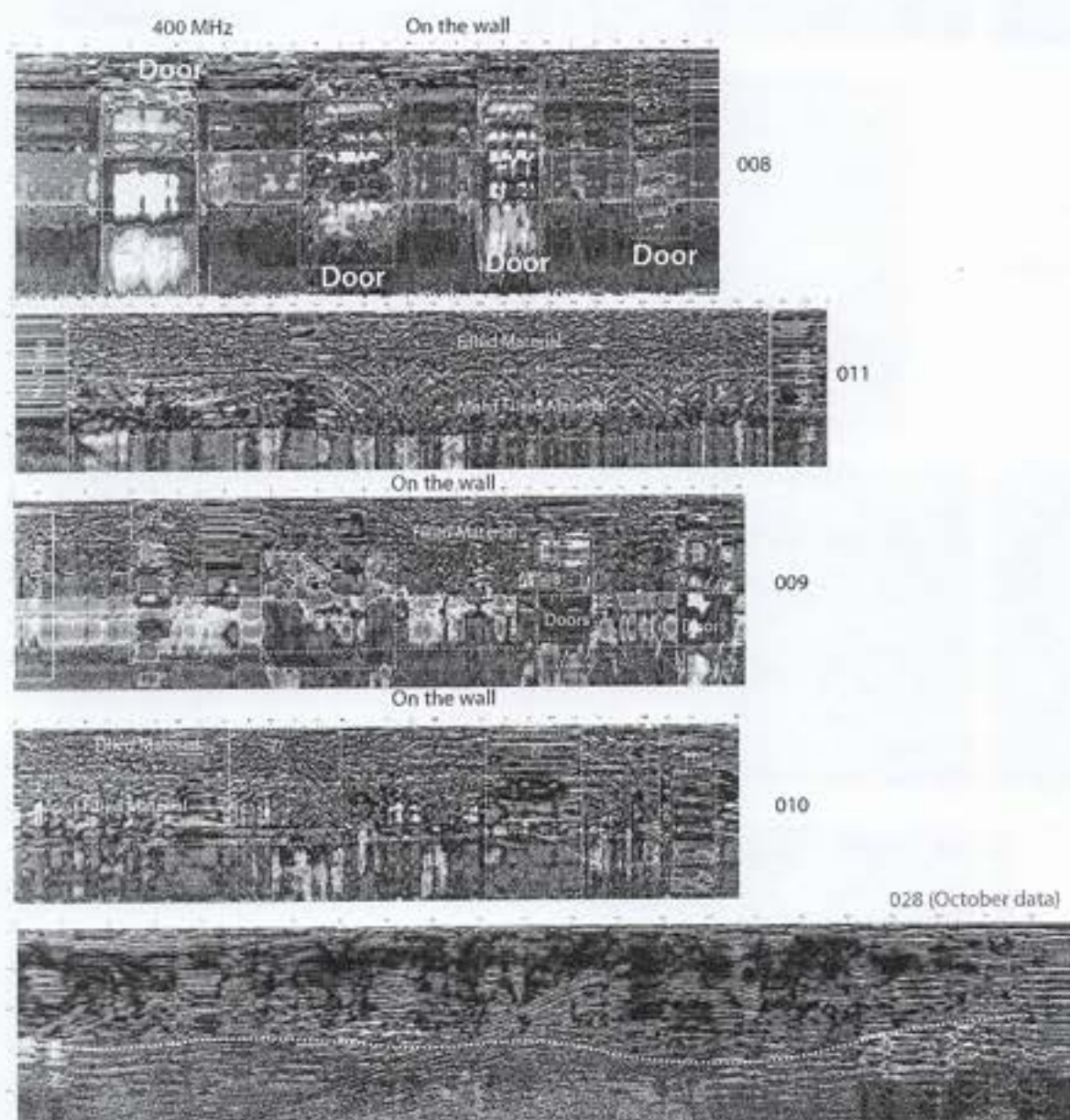
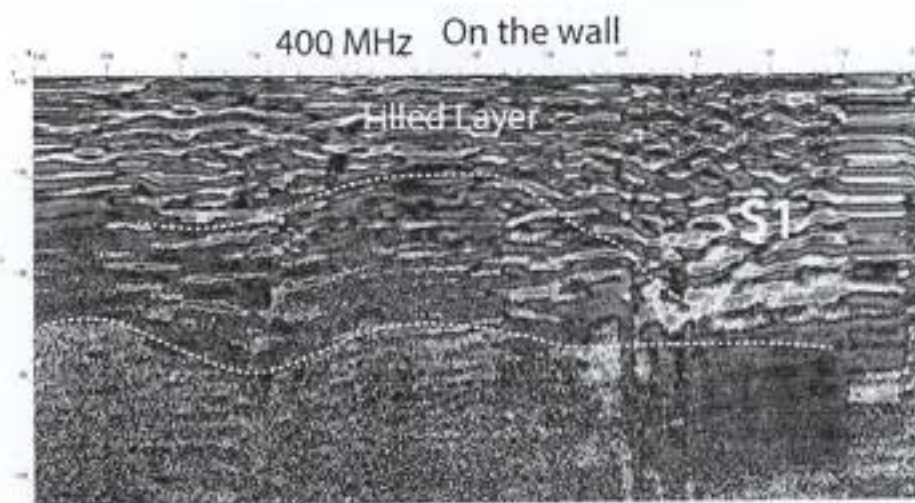
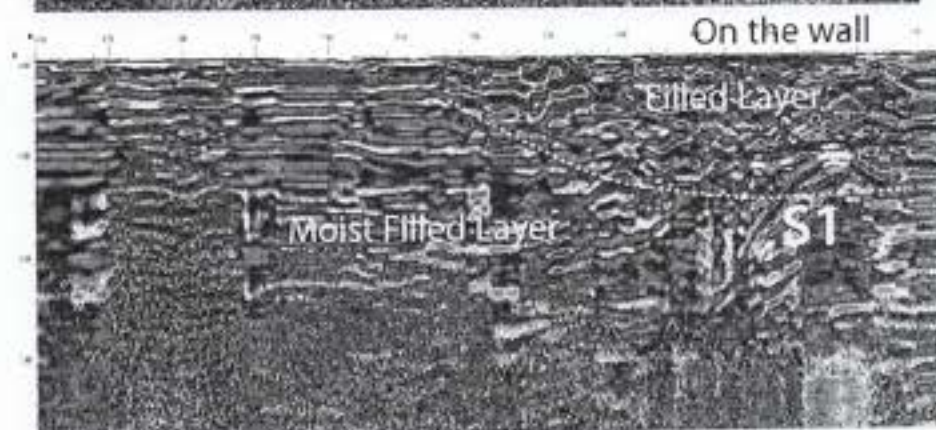


Figure 18a: GPR profiles on the walls of cellar S2

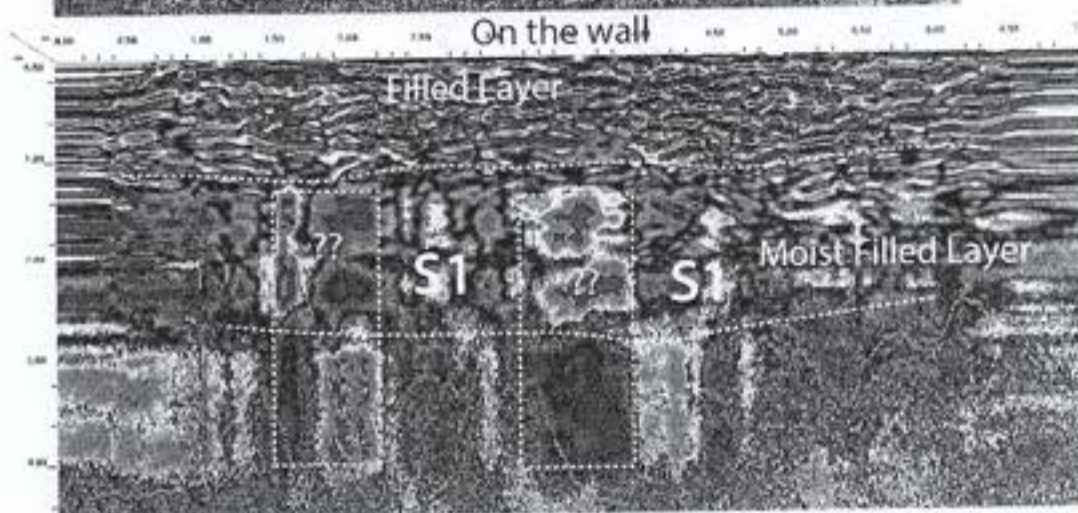




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017

Figure 19: GPR profiles on the outer walls of S1 having concealed well and cellar.



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400 MHz

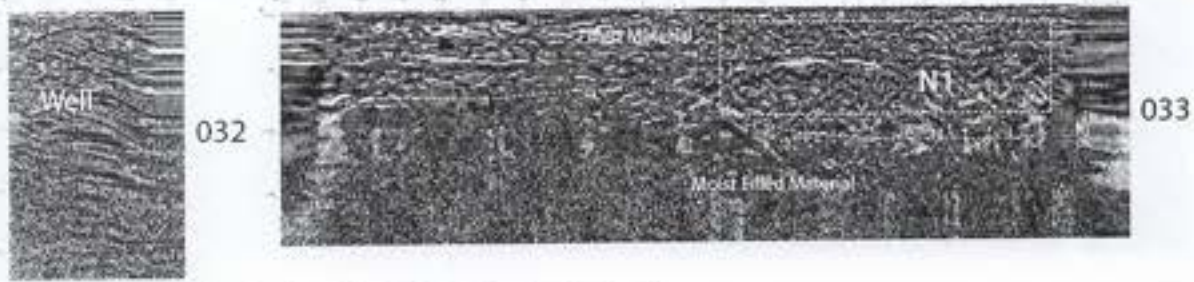


Figure 20: GPR profiles of the outer eastern walls over the functional well, and cellar N1.



400 MHz
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400 MHz Western wall of N3

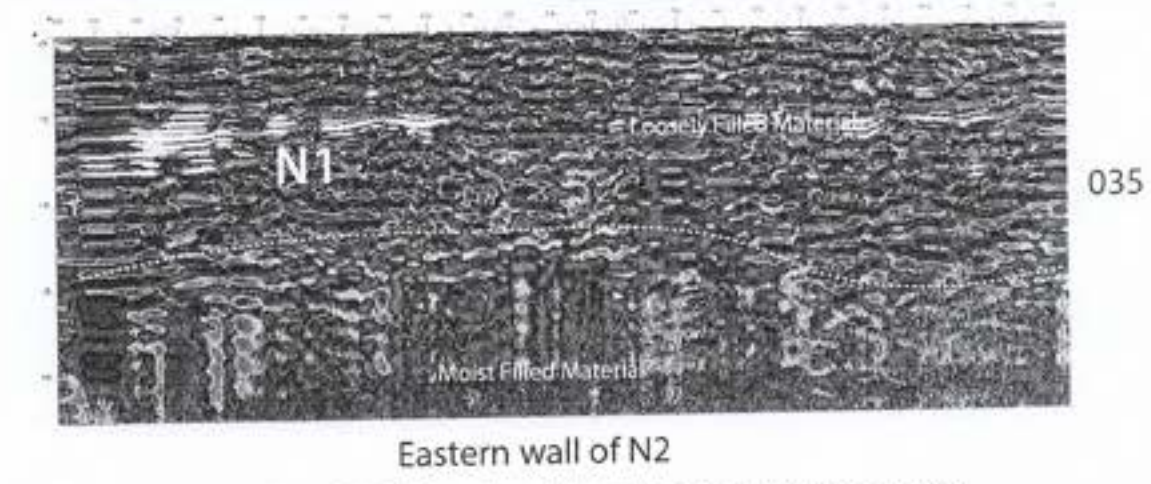
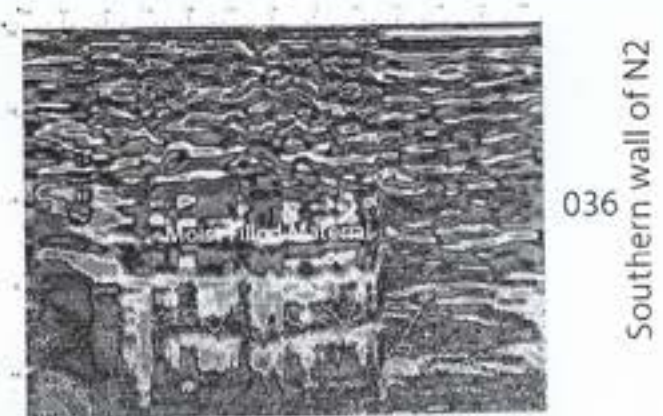
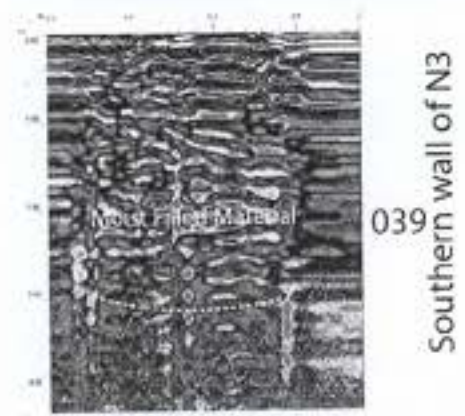
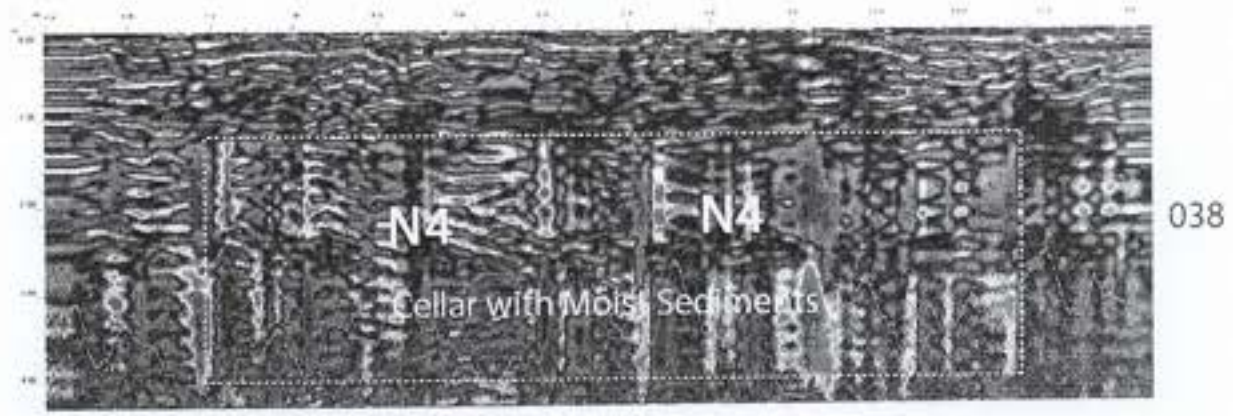


Figure 21: GPR profiles of the walls in the cellars N2, and N3.



All the prominent cellars and buried/ concealed subsurface structures observed in the GPR profiles in the platform area are compiled in the interpretation map (Fig. 22).

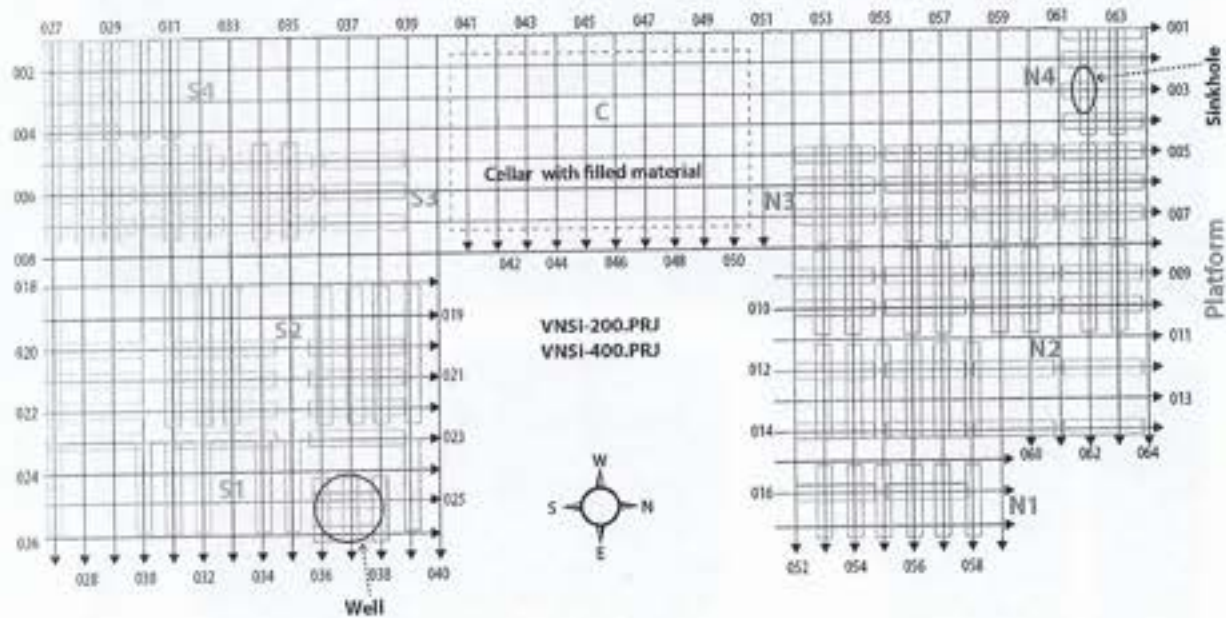


Figure 22: The interpretation map demarcating buried cellars and their extensions, and the well.

The extent of the cellar signatures is marked with blue boxes.

The dotted boxes suggest indicative cellar extensions.



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4. Corridor Area

The GPR survey was conducted in the corridor area with data collection along 35 profiles using 400 MHz antenna, and 22 profiles using 200 MHz antenna (Fig. 23). All the data is processed and considered for interpretation (Annexure-1 and 2). For description, we are presenting south-north oriented profile no. 19 (200 MHz) and profile no. 35 (400 MHz) data. The profile length is 35 m (200 MHz) and 37 m (400 MHz).

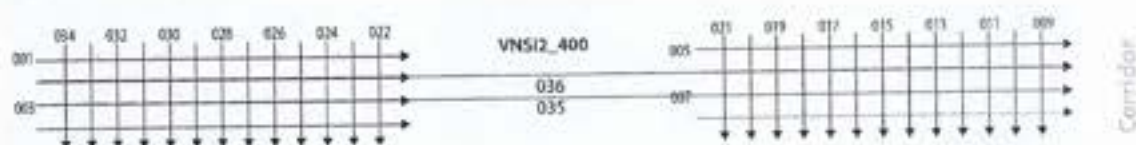


Fig. 23a: 400 MHz Antenna.

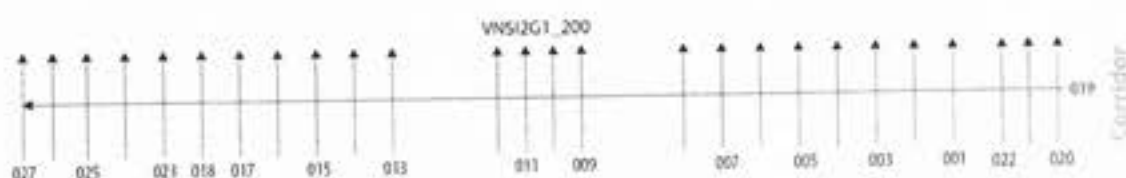


Fig. 23b: 200 MHz antenna

Three distinct layers are observed from the surface (Fig. 24). Layer-1 with variable thickness extends up to a depth of 1 m. The thickness is large towards the northern side in front of halls, comprising a well-structured basement. Layer-2 is observed from the 1 to 2.6 m depth and consists of material property with a high moisture content (reflected by blackish colour) extending up to a depth of 2.5-3 m, below which a largely uniform, undeformed Layer-3 is observed up to a depth of >6 m. Distinct pillars are observed between distances 0-4 m, 15-18.5 m, 21.5-25 m, and



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36-37 m distance that extends to >5 m depths in both (19 and 35) profiles. The southern and northern pillars have some internal constructions, which give a hyperbolic impression in the GPR data.

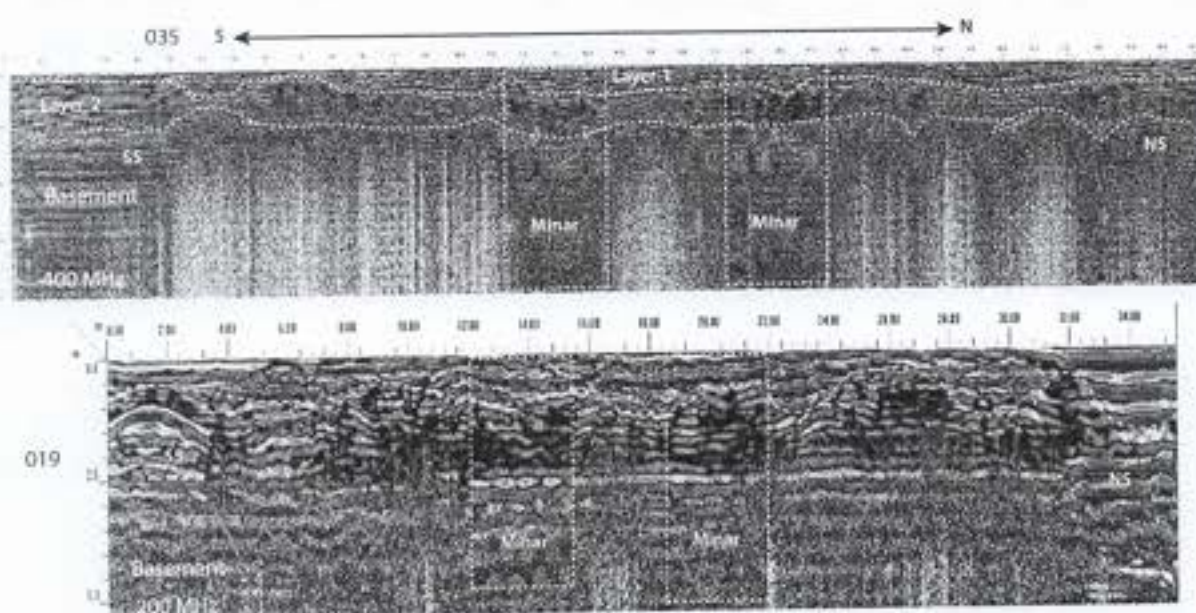


Figure 24: GPR profile across corridor area.
(The cross profiles can be referred from Annexure-1 and 2).



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5. Hall Area

The GPR survey was conducted in and across the halls using 200 MHz and 400 MHz antennae. The long profiles (nine-9) were acquired from the hall area to the platform through the open doors in a west-east direction and six (6) profiles were acquired through the hall from the south to north direction (Fig. 25). The individual halls are also covered for 3-D imaging (Fig. 26). All the data is processed and considered for interpretation (Annexures-1 and 2).

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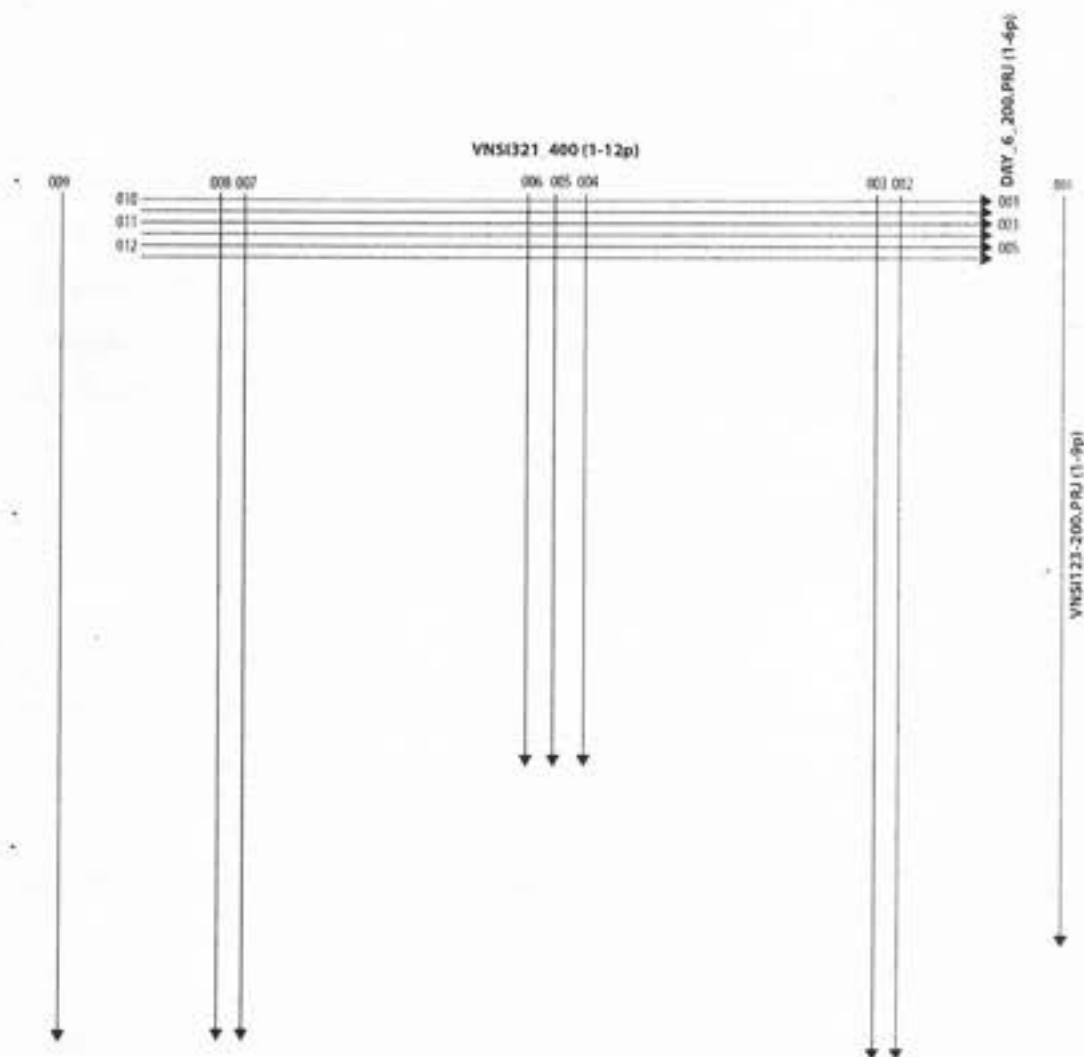


Figure 25: Long profiles across the halls.



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The presence of cavity in the north hall suggests unstable floor, which was being repeatedly repaired using mortar causing higher Layer-1 thickness (Fig. 27). The larger Layer-1 thickness in the north hall is also reflected in the transverse W-E profiles no. 2 and 3 (Fig. 28).

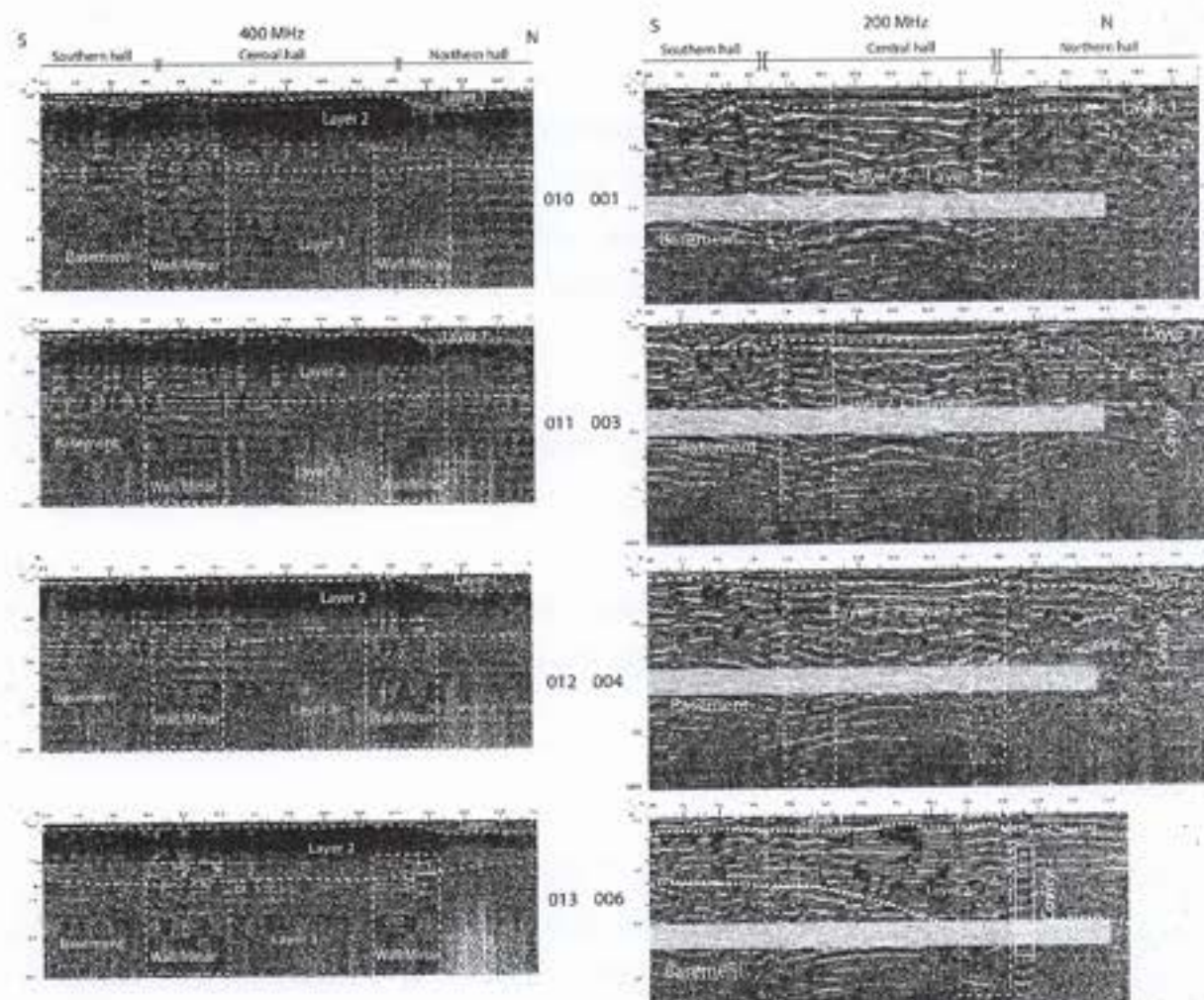


Figure 27: South-North GPR profiles across the halls using 400 MHz and 200 MHz antennae.

Note the same features with variable dielectric contrast characteristics and depth resolution is due to difference in GPR antenna frequency.

West-East Profiles (from Halls to Platform area through Corridor)

To get composite pictures of various segments of the structure, west-east long profiles running from the hall area through the corridor to the platform area (Figs. 25, 28-30) were acquired. The lateral variation along the profile is clearly demarcating the various segments of the structure. The ~40 cm thick Layer-1 in the hall areas increases to >1 m in the corridor and platform area. The Layer-2 thickness varies >2



m across the structures, whereas Layer-3 at depth below 3-4 m forms the basement layer.

The corridor region demarcates the transition of the Layer-2 from hall to the platform region and the corridor-platform divide is marked by arrow in the top profile (Fig. 28-30). The hall areas has layer-2 saturated with moisture whereas in the corridor and platform area have several hyperbolas reflection, suggesting the presence of the partially or completely filled cellars with air filled cavity at top in north cellar (N1, N2 etc.) and south cellars (S1, S2). The cellar position and structures are largely symmetrical in the northern and southern platform region (Fig. 28, 30) across the central platform area covered by the shorter profiles (no. 004-006), which extends only to the west of 'sealed area' (Fig. 25). The central section of the platform is filled with highly disturbed saturated Layer-2 and have undisturbed Layer-2 and Layer-3 interface (Fig. 29). For detailed also refer to the platform section.

The stratigraphy in the halls is well developed, however, there is a marked difference in Layer-2 thickness and saturation level across halls. In the central hall, Layer-2 is highly saturated and thicker than the adjoining halls (Fig. 28-30). The basement marked by broad hyperbolas at ~5 m is clearly visible under the central and south halls (Fig. 29-30), but is less prominent under the north hall, though Layer-3 remains undisturbed.

The presence of a rectangular gravel fill body, akin to a side opening/ door at a depth of ~4-6 m in the south corridor (profile no. 009; Fig. 25, 30) at the basement level marks another unique observation. A similar opening at a shallower level (down to ~3 m) is observed in the north corridor (profile no.001; Fig. 21) to the north of the north hall.



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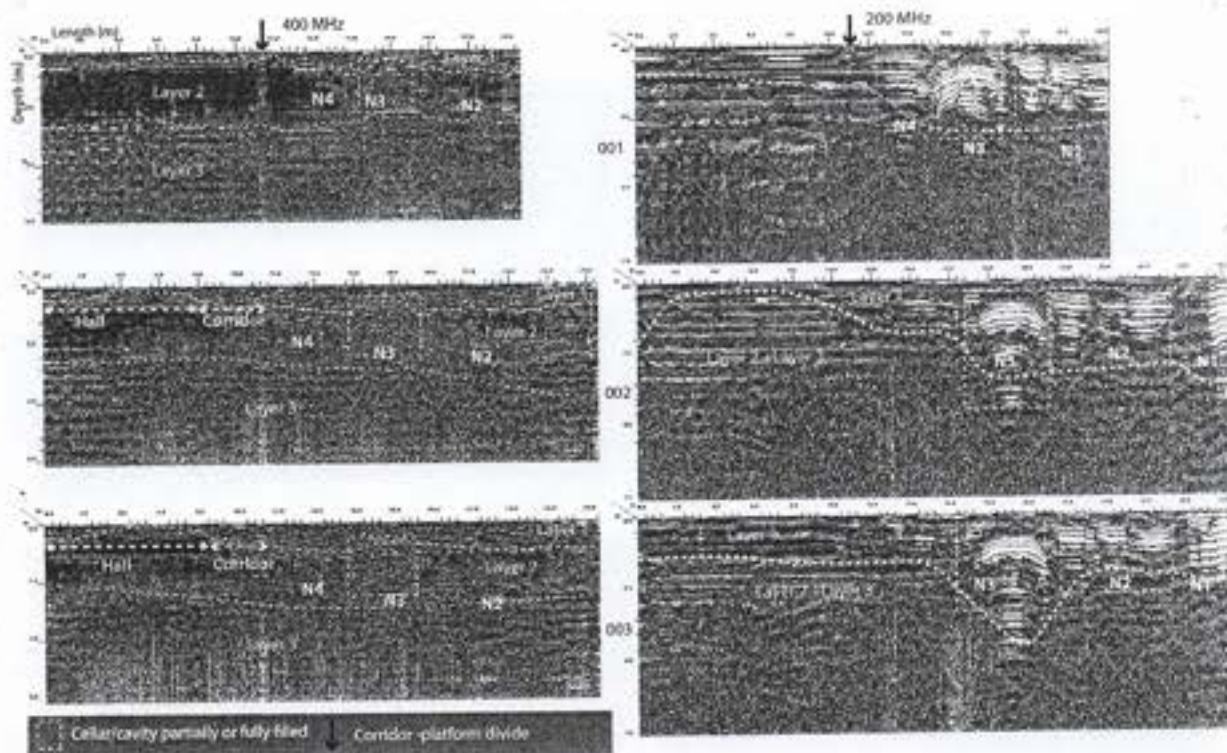


Figure 28: West-East long profiles across different structures through the north hall and north corridor.

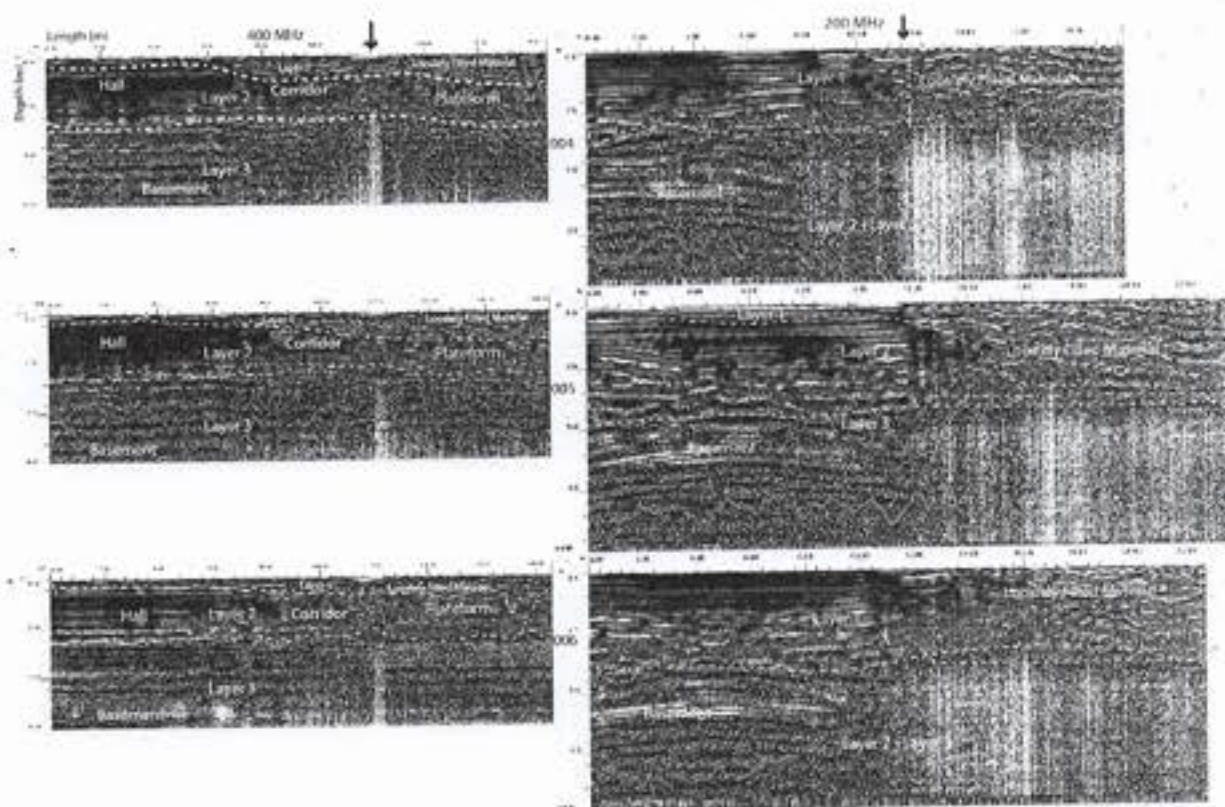


Figure 29: West-East long profiles across different structures through the central hall.



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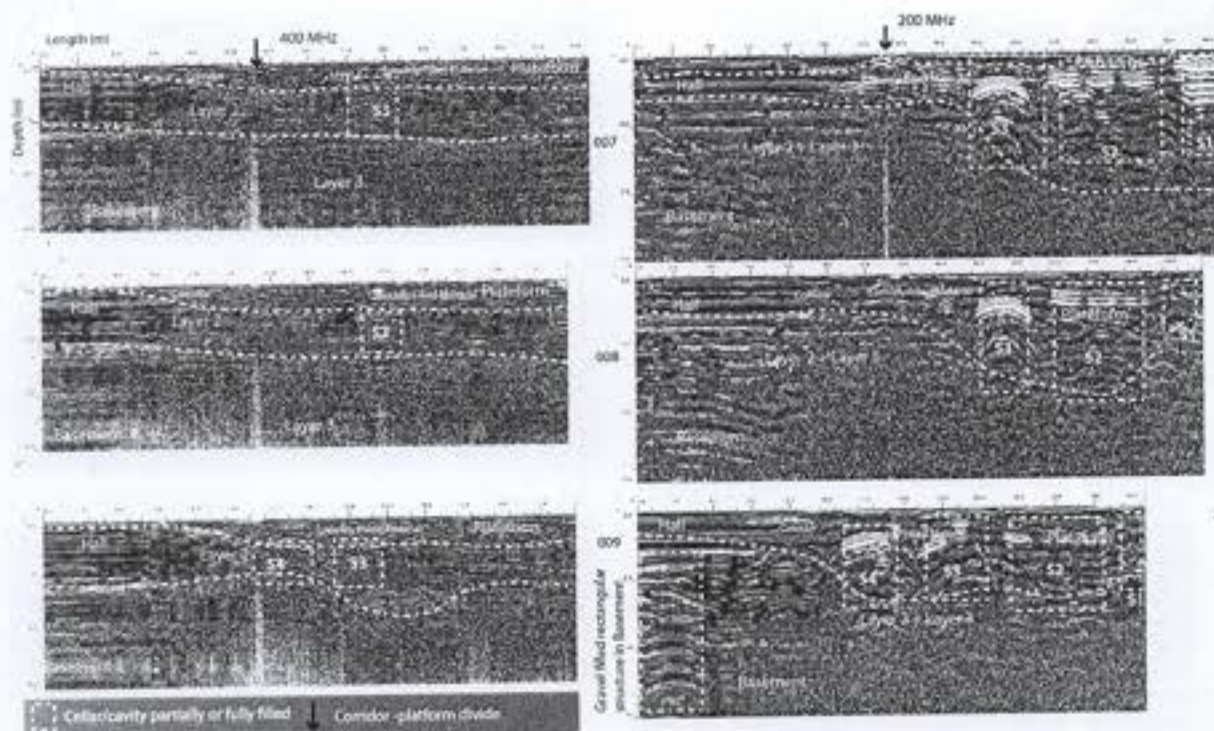


Figure 30: West-East long profiles across different structures through the south hall and south corridor.

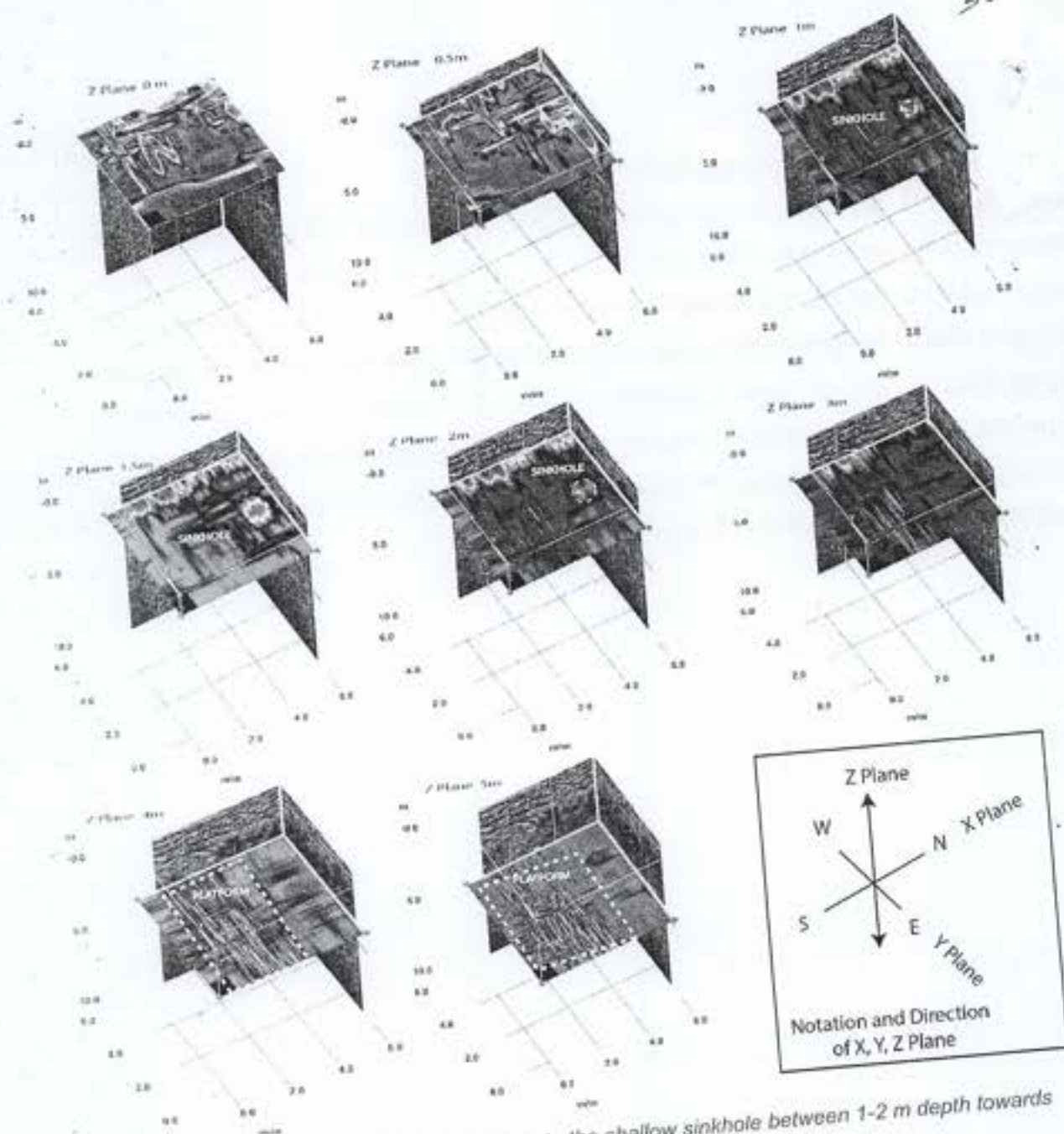


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3-D Structure of Subsoil in the Halls

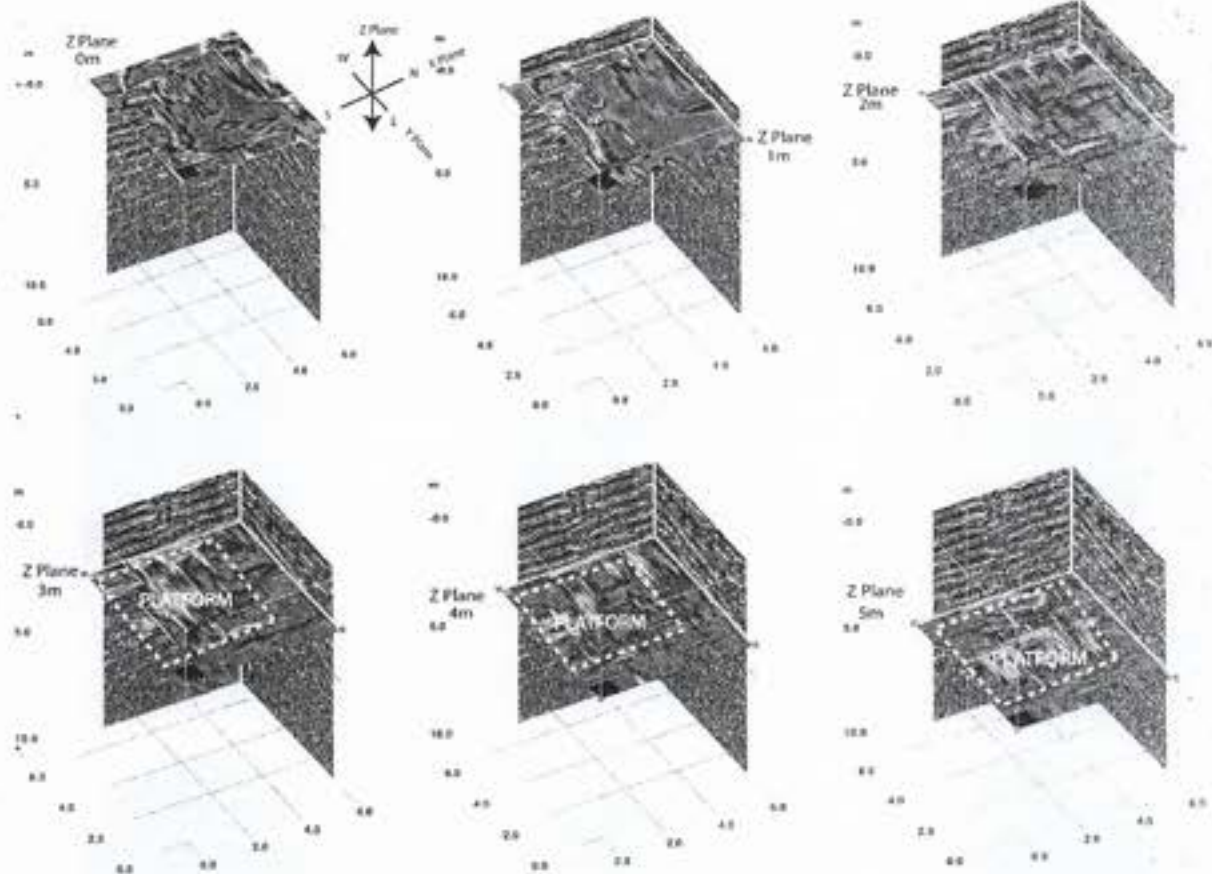
North Hall: A 3-D map is created using 7 x 7 profiles (200 MHz) in x-axis (N-S profile no 1-7) and y-axis (W-E profile no. 8-14) (Fig. 31). Eight horizontal slices separated by 0.5 m up to 2 m depth and 1m until 5m depth sections are presented owing to sharp changes in the upper column (Fig. 31). The heterogeneous boulder-mortar filled material of Layer-1 extends down to ~1 m depth with definite signature of narrow (<1 m wide) sinkhole between 1 to 2 m depth towards the northern door of the hall (Fig. 31-3rd, 4th and 5th horizontal slice of the 3D profile). The basement platform is nicely reflected at ~ 5 m depth.





Central Hall: A 3-D map with six horizontal slices of 1 m depth are created using 7 x 8 profiles (200 MHz) with 7 west-east profiles in y-direction and 8 north-south profiles in the x-direction (Fig. 32). The stratigraphy and basement structure are well expressed with higher Layer-1 thickness towards the margins in the central hall.





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South Hall: The 3-D map with 1 m vertical slices is created using 7 x 7 north-south and west-east profiles in x- and y-directions (Fig. 33). The Layer-1 with loosely filled material extends ~1.5 m depth, especially towards margins. Layer-2 as a domal heap with a higher thickness in the middle extends downwards to the basement platform, which represents Layer-3 at ~5 m depth.

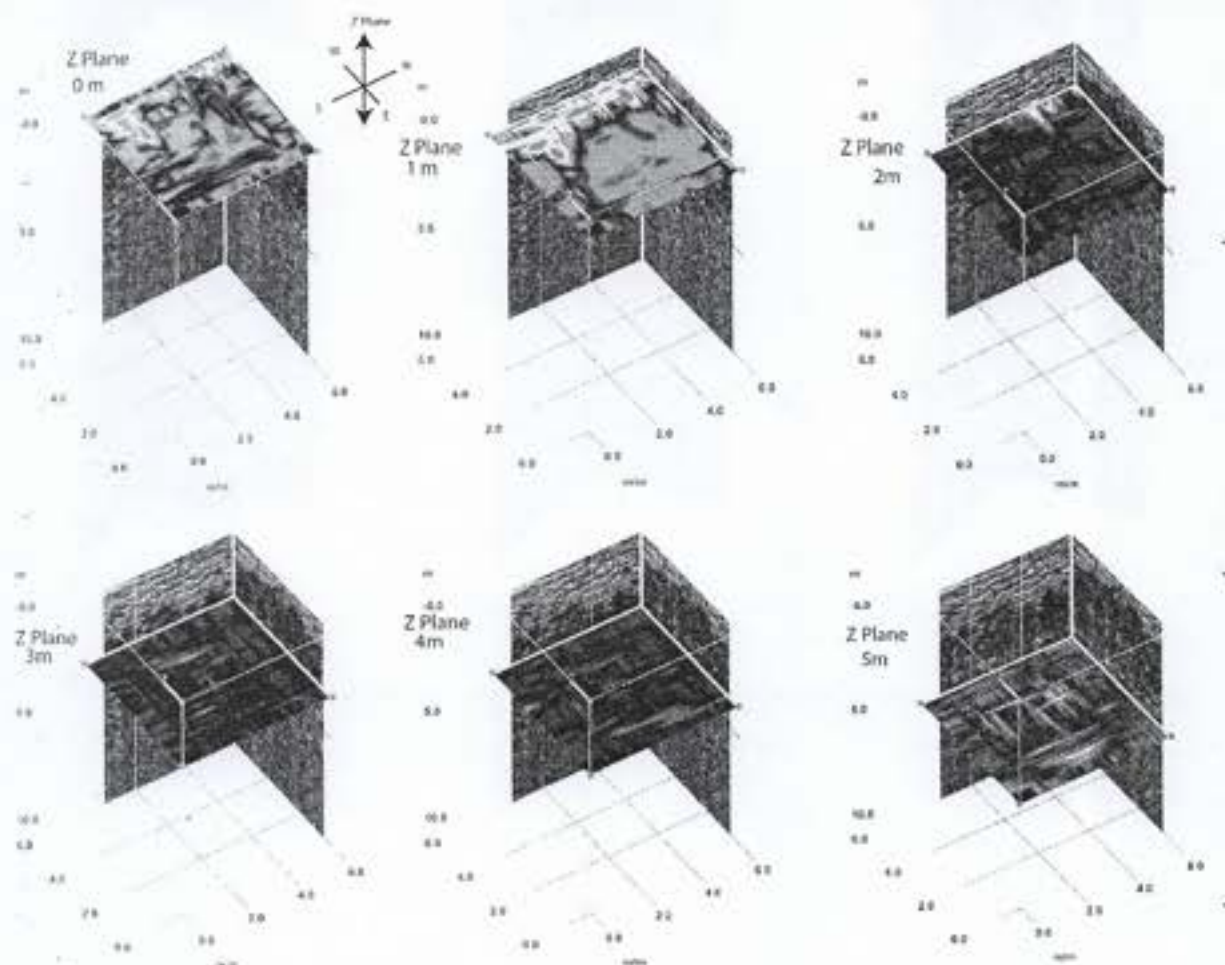


Figure 33: 3-D profiles of central hall. Please note the thicker Layer-1 towards margins and basal platform at ~5 m depth.



6. Western Wall

The GPR survey was conducted across the western wall using 200 MHz and 400 MHz antennae. The four S-N trending long profiles along with 53 profiles were acquired in distance and 21 profiles in time mode in E-W and S-N directions (Fig. 34). All the data is processed and considered for interpretation (Annexure-1 and 2).

The northern part of the western wall area is covered with ~1.5 m of loose debris with overall elevation on the northern and central platforms lying ~0.5 to 1 m below the hall floor. Due to the debris cover and lack of elevation control, the acquired data had elevation artifacts. Another set of GPR data using a 400 MHz antenna was acquired in time mode and used for interpretation. Due to time-mode data acquisition, the distance resolution is poor, though it has been calibrated using the length measured manually during data acquisition.

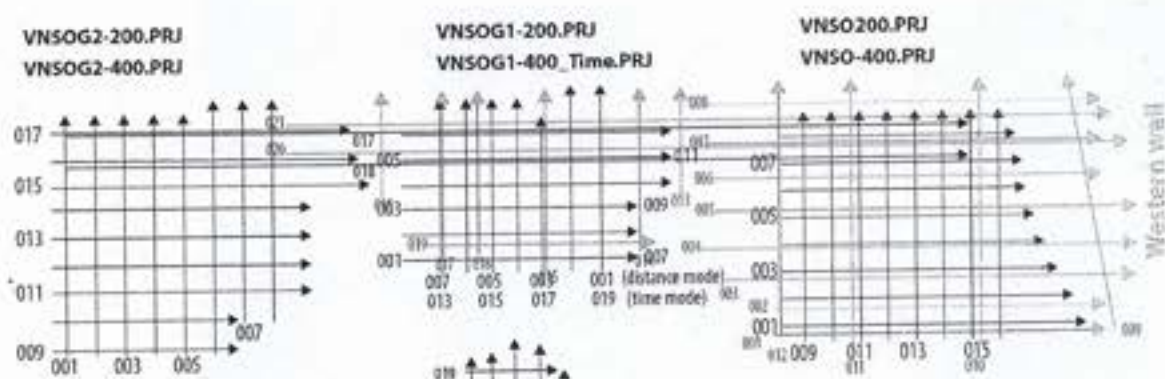


Figure 34: GPR profile across the western wall area. The upper panel shows the layout of data acquired during August 2023 with debris cover and the red profiles are the data acquired during 20-23 October 2023 after removal of debris. (Please refer to Annexure-1 and 2 for all the profiles).

The western wall area constitutes three platforms (which are razed extensions of respective Halls) with buried walls and westward extensions of foundation of protruding arc from the central hall. The important target of the GPR survey was to image the subsurface extensions of the foundation wall.

It is clear from the GPR profiles, the stratigraphy is well developed (Fig. 35) and interpretation in the stratigraphy and cross-cutting relationship have been used for interpretation. Except for two marked artifacts in the GPR data, where the antenna was lifted over the small platform construction, the foundation walls are well



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preserved and extend into Layer-3 stratigraphy to over 5 m depth (Fig. 35). The foundation of the arch, appearing as a >1 m wide discrete structure, is extending westwards as observed in profile no 20 and 21 (Fig. 34-35). The margin walls are also well preserved and observed in the profiles. A similar foundation setup is observed in other parts of the structure, suggesting their co-genesis.

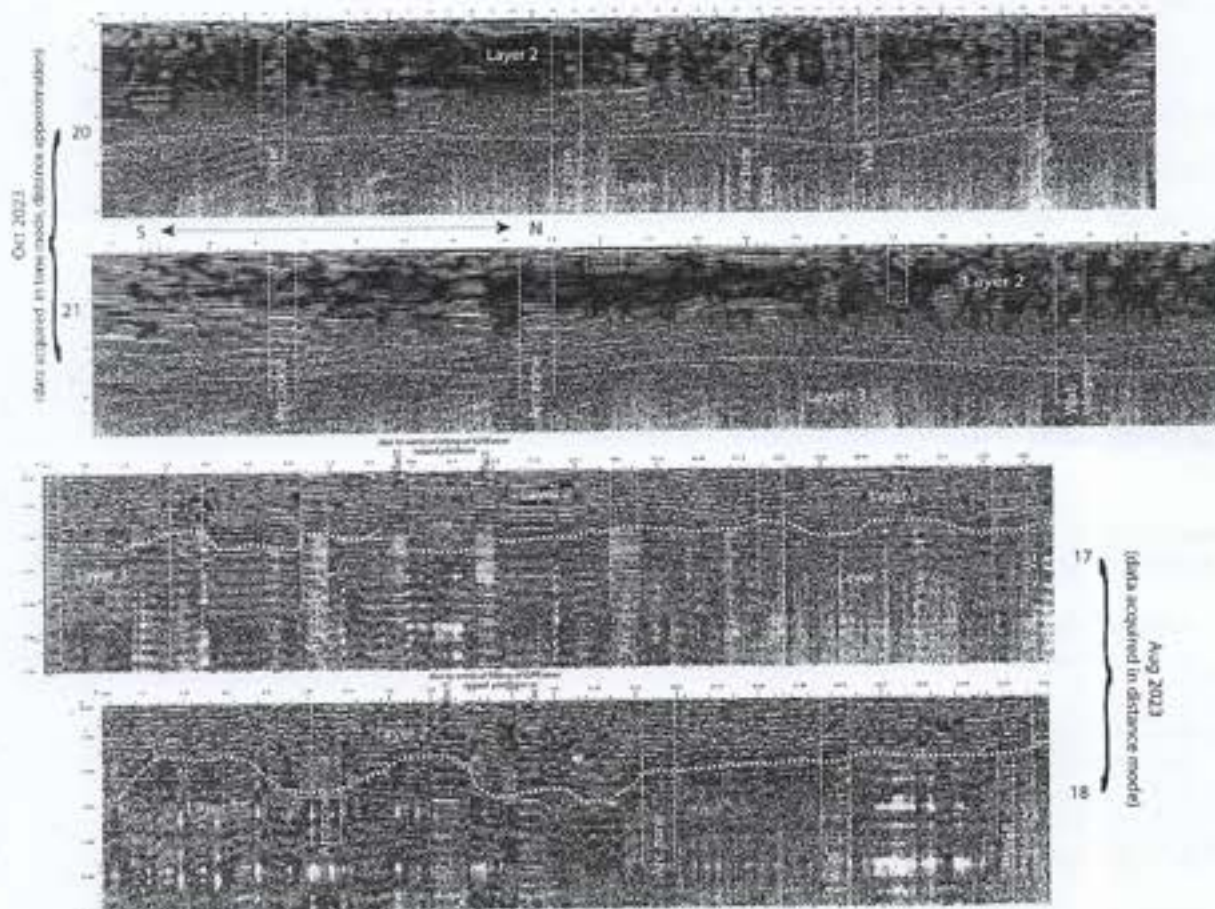
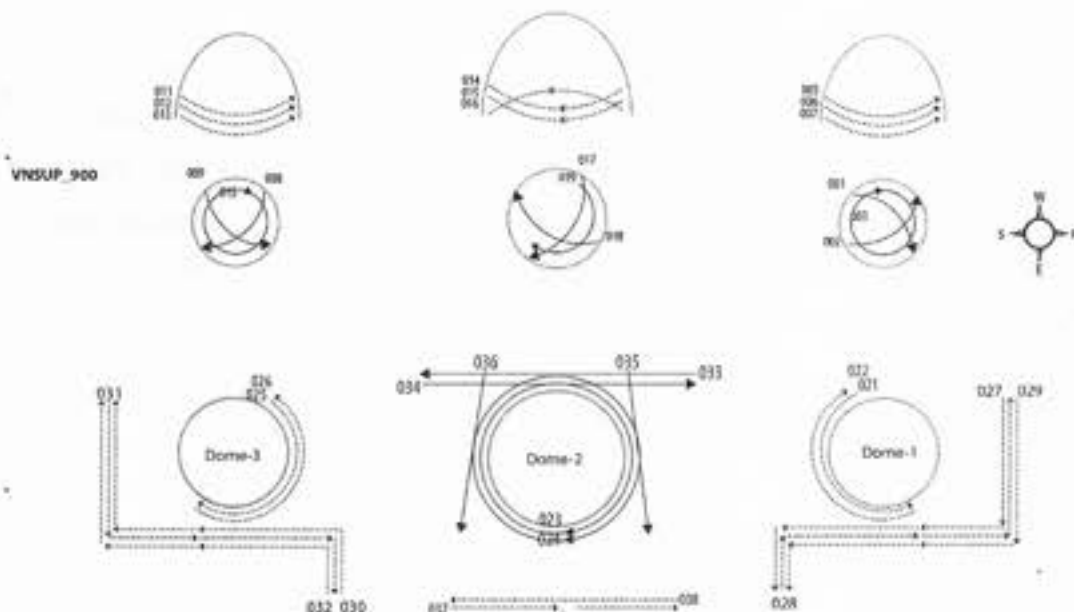


Figure 35: N-S profiles across the western wall area.



7. Roof Top

The GPR survey was conducted at the rooftop with data collected along 38 profiles using 900 MHz antenna, and 28 (VNSUP1-400), 27 (VNSUP2-400) and 35 (VNSUP2-400) profiles using 400 MHz antenna (Fig. 36). All the data is processed and considered for interpretation (Annexure-3 and 4). For description, we are presenting profile no. 21 (north dome), 24 (central dome) and 25 (south dome) (900 MHz) for the dome bases and profile no. VNSUP1 03, 018 and VNSUP2 003, 017 (400 MHz) for the rooftop (Fig. 36).



Three profiles (21, 24, and 25) were selected to represent each dome (Fig. 37), while the remainder were included in the annexure. The survey was conducted using 900 MHz antennae in time mode, and the signal floor reached a depth of 1 meter. The profiles have been categorized into two sections: layer 1 consists of strata with a high moisture content, while layer 2 contains a concealed matrix of reinforcement structures.



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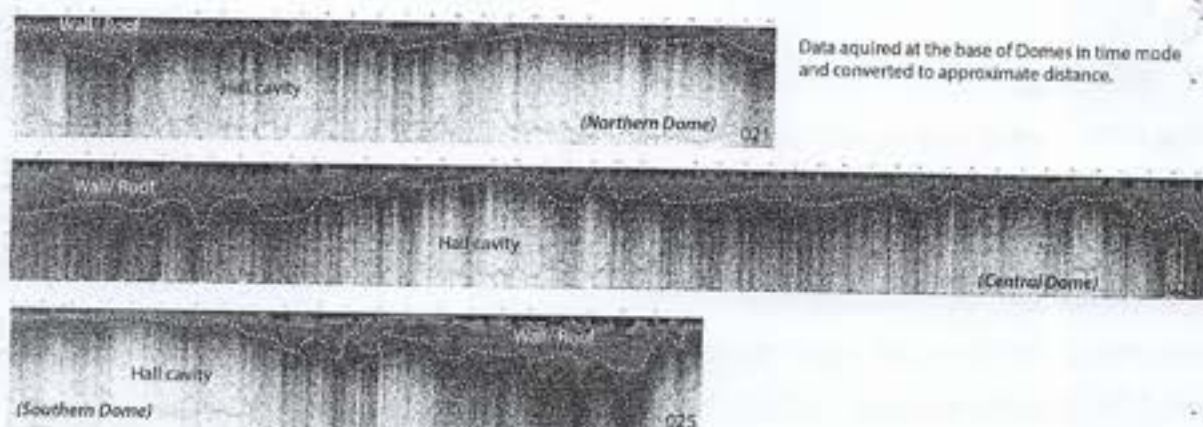


Figure 37: Profile around domes.

The GPR survey was conducted on the rooftop, covering sides of the domes 1 and 3 (Fig. 38). The survey used 400 MHz antennae in distance mode with a maximum depth of 4 meters. Profiles have been categorized into two groups, and from these, we selected four profiles. Profile no. 03 and 18 represent the area's northern side (VNSUP1), while profile no. 3 and 17 represent the southern side (VNSUP2; Fig. 39). The profile of both side distances is 12 m and the depth is 4 m. Layer-1 extends up to a depth of below 1 m roof bed observed. Layer-2 is observed from the 1-2 m walls identified on the northern and southern sides of the area (Fig. 39)

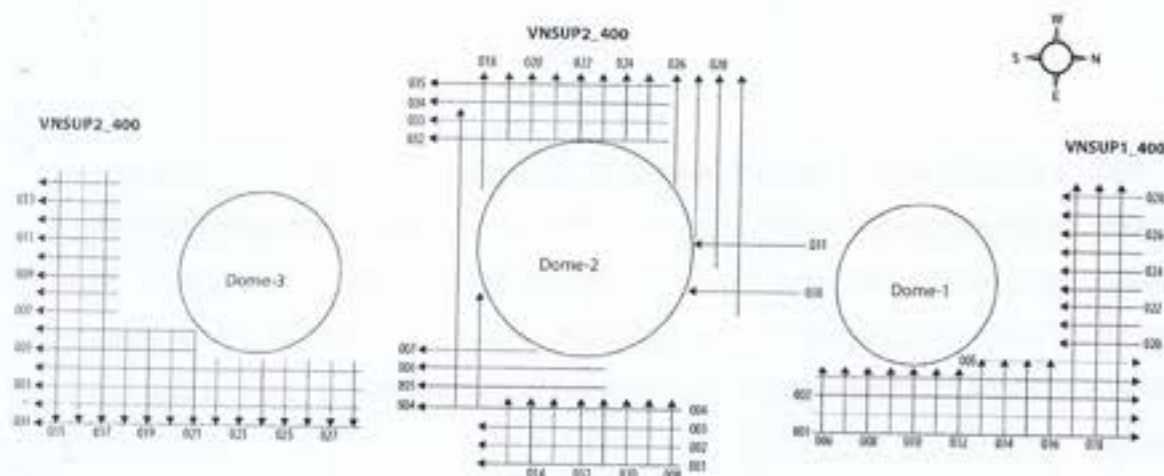


Figure 38: Profile layout at the rooftop using 400 MHz antenna.



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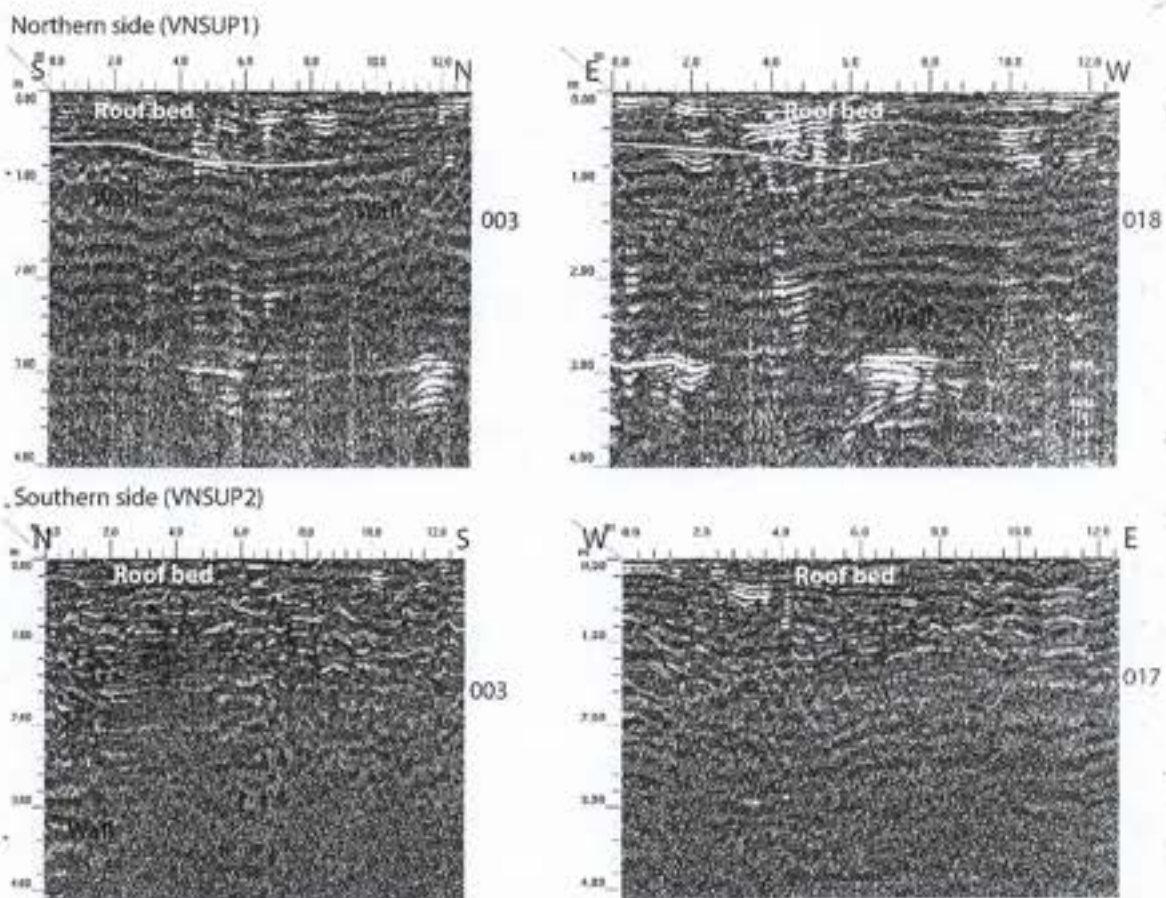


Figure 39: Representative profiles clearly showing roof beds, walls, and hollow cavities of the rooms underneath.



Conclusions

All the observations are summarized in the Fig. 40.

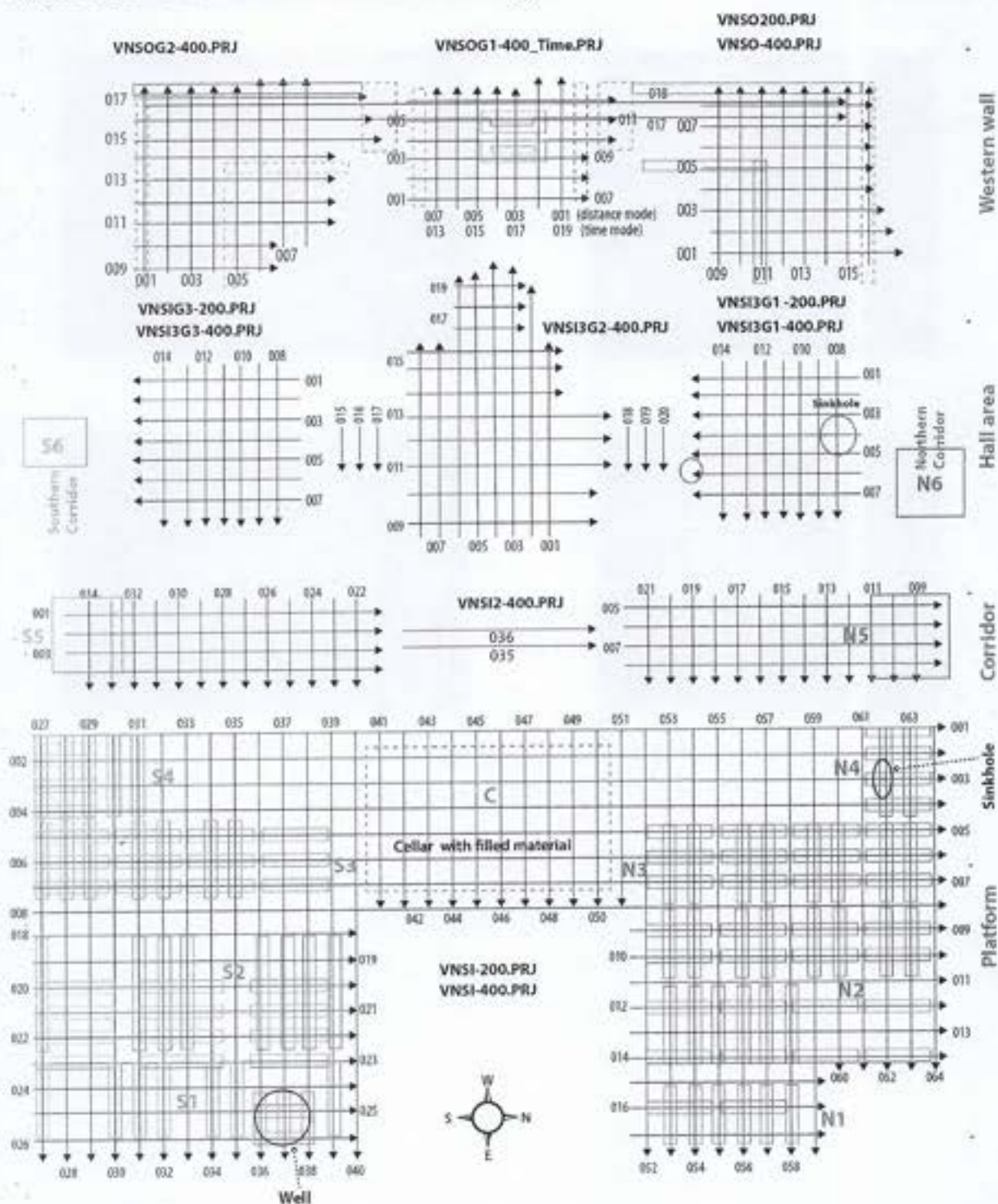


Figure 40: Final summary map of the GPR interpretation map. The new findings are marked in blue and at place in black. The dotted boxes are indicative interpretation.



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Condition Report



Condition Report

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Western Wall

(a). **Section A** - From southwest corner moving towards north up to south facing southern broken entrance (half arch) of western chamber.

(i) Construction Material

1. Sandstone
2. Lime mortar
3. Iron dowels/ clamps
4. Bricks
5. Lime plaster



General views of Section 'A' of western wall

(ii) Observations

1. Multi coloured sandstones are used as construction material like yellowish, light pink, dark tan, buff and light reddish.
2. Entire portion is constructed by plain and carved sandstone blocks fixed using lime aggregate mortar. Wall surface of this area is partially lime coated.



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3. The southwest corner minaret is made up of sandstone blocks stands on four pillars; the upper dome portion is lime plastered. Entire area is coated with thick lime wash.

4. The area adjacent to corner plain sandstone blocks and up to northern side first turn horizontally and from the existing ground level up to cornice of the roof vertically are made up of carved sandstone blocks. The closed part of entrance gate and just besides and above the closed gate are made up of both uncarved stone blocks, ancient bricks fixed with lime aggregates mortar and plastered with lime surkhi mortar having plain upper surface.

5. Use of modern cementing material is visible on the closed smaller entrance gate. The upper portion of the gate is of arch like design in sandstone blocks.

6. To the right side of the entrance gate, that is southern side, at approx. 2 feet width and 8 feet height, is filled with stone pieces and aggregate of sand in lime mortar. Left side of the entrance gate, that is northern side, a small portion at approx. 13 feet height, is filled with rubble and lime mortar.

7. Parapet wall above the stone cornice is made up of ancient bricks plastered with lime.

8. The wall facing south is entirely made up of well carved sandstone blocks clamped with iron dowels. The south facing entrance gate to enter the western chamber is in ruined condition; only half of the arch is present. On observation it is found that the one of the portions of pilaster is missing as the inner mortar is visible. The top of the arch is filled with lime mortar.

(iii) Weathering of Built Materials

1. Stone surface shows multiple deterioration patterns, i.e. bursting, blistering, delamination, exfoliation, powdering, sanding, flaking, chipping, staining, biological colonization, discoloration, mechanical damage etc.



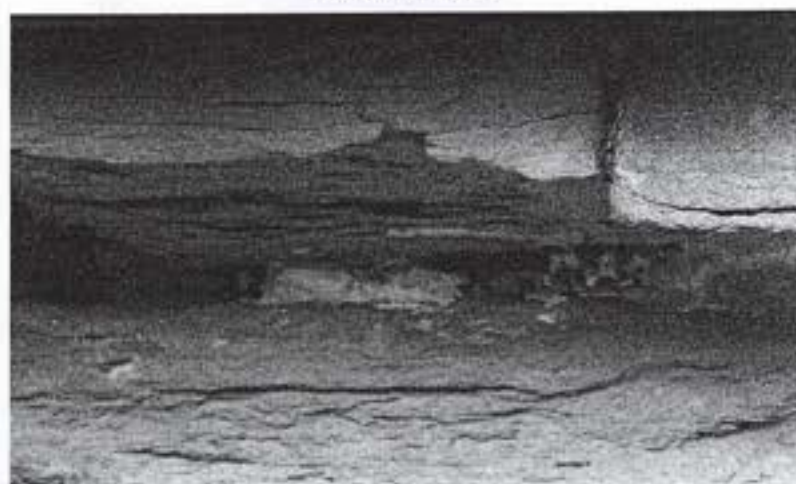
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Bursting



Discoloration



Delamination



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Flaking and Fracture



Surface erosion



Peeling



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Scaling

1. Iron dowels and clamps which are used on the wall to fix the stone blocks are in moderately to highly rusted condition specially those which are more exposed to the vagaries of nature.

2. The mortar used on this wall also shows deterioration due to open and unroofed exposure of the western wall.

(b). Section B - Western chamber

(i) Construction Material

1. Sandstone
2. Lime surkhi mortar
3. Iron dowels/ clamps



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Biological colonization and discolouration

Lime wash

General views of section 'B' (blocked entrance of western chamber)

(ii) Observations

1. Entrance gate to central hall (closed with sandstone slabs) is built up of yellowish and reddish sandstone. Entire gate is beautifully carved and decorated with *Torana*, lotus buds like figures. At the lower portion of this gate lime coating is also present. The central portion of western wall is highly carved and decorated except the portion of entrance gate which has been closed with sandstone slabs.
2. On both sides of the gate deep square (holes) having dimension 10 inches x 8.5 inches are present. These holes go through the entire wall matrix.
3. Two niches are present at lower portion in this area.
4. At the top of carved wall portion, lime mortar with stone blocks as filling materials are present.
5. In front of this large gate two graves are present. This structure is built up of modern bricks and stone rubbles and slabs.



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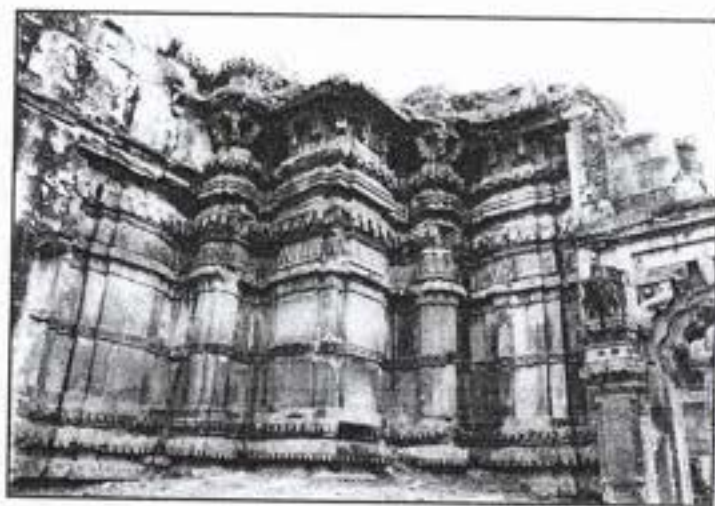
(iii) Weathering of Built Materials

1. Stone surface showing multiple deterioration patterns, i.e. bursting, blistering, exfoliation, powdering, sanding, flaking, biological colonization, discoloration, mechanical damage, deposition of dust and dirt, etc.
2. On the upper decorative panels carving and some figures are totally eroded at some places due to long time exposure to rain and other environmental factors.
3. On the upper portion salt incrustation was also observed.

(C) Section C - From northwest corner moving towards southern side up to northern entrance of western chamber (half arched).

(i) Construction Material Used

1. Sandstone
2. Ancient bricks
3. Lime mortar
4. Iron dowels
5. Iron door

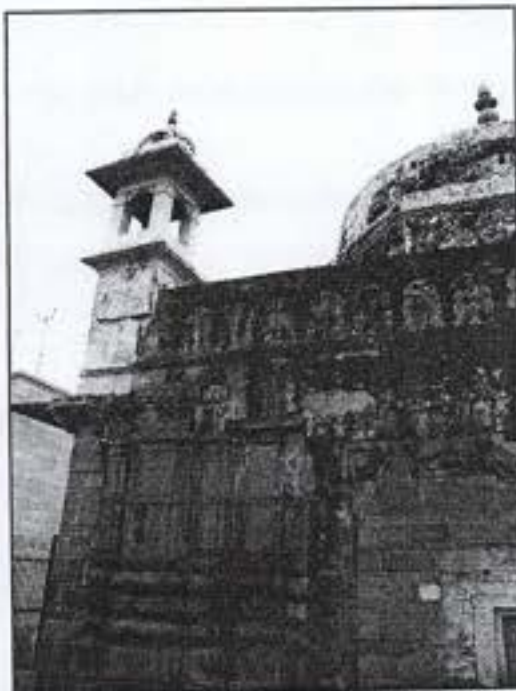


Biological growth, salt incrustation and scaling
General views of section 'C' (central portion of western wall)





Formation of biofilm and lime wash



Formation of biofilm

(ii) Observations

1. Multi coloured stones, yellowish, light pink, dark tan, buff and light reddish are used as building material for the construction of this portion. Lime plaster is used as plastering material.
2. On top of the plane surface, lime coated minaret stands on four pillared structures. Below the minaret brick-built parapet wall is present which is made up of ancient bricks and plastered with lime. In some locations bricks are exposed.
3. Just above the corner plain wall, two layered stone projections are visible. The lower projection is of thick and small sandstone blocks in comparison to the upper broken layer which is thin and of large sandstone blocks.
4. In the centre is blocked entrance which has been closed with stone blocks. A small iron gate gives access to the stairs inside for the roof of the existing structure.



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5. Area surrounding iron gate is coated with thick lime wash.
6. The bigger arched entrance is blocked with lime surkhi mortar and blocks of sandstone.
7. Some stone slabs used for blocking the entrance are missing from the top which exposes the beautiful underlying carved sandstone arch.
8. Parapet wall above the stone cornice is also made up of ancient bricks plastered with lime plaster.
9. On visual observation it is found that the wall facing north is entirely made up of well carved sandstone blocks clamped with iron dowels. The northern entrance gate to enter the middle section is in ruined condition; only less than half of the arch is present.

(iii) Weathering of Built Materials

1. Stone surface of this portion is also having the same deterioration pattern as noticed in other parts of the western wall.
2. Salt incrustation is also observed at many locations due to retention of water and through run off water flowing from the roof.
3. Lime mortar and exposed bricks turn blackish due to formation of biofilms.
4. Iron dowels and clamps used on the wall to fix the stone blocks are in moderately to highly rusted condition particularly which are more exposed to vagaries of nature.
5. The mortar and plaster used on this wall have deteriorated due to open and unroofed exposure of the western wall.



Southern Wall

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(i) Construction Material

1. Sandstone
2. Ancient bricks
3. Lime *surkhi* mortar
4. Lime plaster
5. Stone pebbles
6. Iron dowels



Delamination



General view of southern wall





Exposure of ancient bricks due to loss of binding materials

(ii) Observations

1. *Jagati* is constructed of sandstone slabs which has been fixed with iron dowels.
2. Strating from southwest corner and up to opening of southern cellar, i.e. from platform up to the floor level of the existing structure following observation came into light:
 - 2.1 Ancient bricks and stone blocks used as building materials.
 - 2.2 Lime mortar and lime plaster.
 - 2.3 Multiple coats of lime wash used in this location.
 - 2.4 From the plinth of the southwest corner up to the height of the floor of the existing structure plain sandstone blocks fixed using lime aggregate mortar. Entire surface is lime coated.
 - 2.5 Carved cornice stones are badly deteriorated. Loss of binding materials between sedimented stone layer is noticed.
3. Just above the corner plain wall two layered stone projections are visible. The lower projection is of thick and small sandstone blocks in comparison to the upper layer which is thin and of large sandstone blocks. These projections are uniformly present in the south wall of the main structure and further extending towards the east wall, i.e. the facade wall uniformly in the similar pattern.
4. The open platform has a dwarf parapet wall with dwarf pillars.



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Eastern Wall

(i) Construction Material

1. Sandstone
2. Ancient bricks
3. Modern bricks
4. Lime mortar
5. Lime plaster
6. Stone pebbles

(ii) Observations

1. From the southeast corner, the present ground level of east side up to the floor level of the existing structure (open space), side wall up to the carved stone is filled with modern bricks, ancient bricks, plain and carved stone blocks.
2. Lime mortar and modern cement are used as plastering materials.
3. Different floral designs are present in this location.
4. From the corner of the wall up to northeast corner side wall is made up of stone and ancient brick. Lime mortar and cement are used here as plastering materials.
5. Entire wall has multiple layers of lime wash.
6. Condition of the cornice stone is affected due to natural and manmade reasons. Just above the cornice stone, railing built up of stone slab is present at this location.

North Side

(i) Construction Material



1. Sandstone
2. Ancient bricks
3. Modern bricks
4. Lime mortar
5. Lime plaster
6. Stone pebbles

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(ii) **Observations**

1. Plain wall continues up to door of north cellar.
2. Composite materials (stone, ancient and modern bricks) are used for the construction of wall.
3. Stone slab railing is present in this area having 07 numbers of stone pillars and 6 numbers of slabs.
4. Multiple layers of lime wash are present on the wall.
5. On the right side of the cellar toward west staircase which rest on both direction east and west is the way to main structure.
6. The entrance gate structure is plastered with lime mortar and having multiple layers of lime wash.
7. The north wall of existing structure has three arched opening which have now been walled in from below. The western opening houses a small room.
8. Two layers of *chhajjas* are present, lower *chhajja* is smaller in size and made by thick stone while upper *chhajja* is made up of large stone slabs and is comparatively thin.
9. At the top portion 2 minarets are present at both end (east and west).



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General views of north side wall (from ground level to platform level)



General views of north side wall of main structure

North Cellar

(i) Construction Material

1. Sandstone
2. Ancient bricks
3. Modern bricks
4. Lime mortar
5. Lime plaster



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(ii) Observations

1. This pillared structure constructed over 14 numbers of pillars in which 2 numbers of pillars are built by modern bricks (dimension 3" x 9") while other are built up of sandstone. Two stone pillars rest on brick pedestal.
2. Pillars are in square and hexagonal shapes; 3 numbers of stone pillars are beautifully carved and having bell like designs.
3. In two stone pillars niches are carved in four sides of pillar.
4. Some inscriptions are visible in two stone pillars.
5. Eastern wall is built up of ancient bricks and lime surkhi is used as mortar.
6. Ceiling slabs are almost plain and coated with lime, four numbers of gates are visible on both sides. Those on east are closed with brick masonry.
7. At west side inner hall (N3) is built up of large sized stone blocks, in which some stone blocks are carved.
8. Presence of charcoal is noticed in this location at the gaps of stone/ brick blocks.

South Cellar

(i) Construction Material

1. Sandstone
2. Ancient bricks of different size
3. Modern bricks
4. Lime mortar



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(ii) Observations

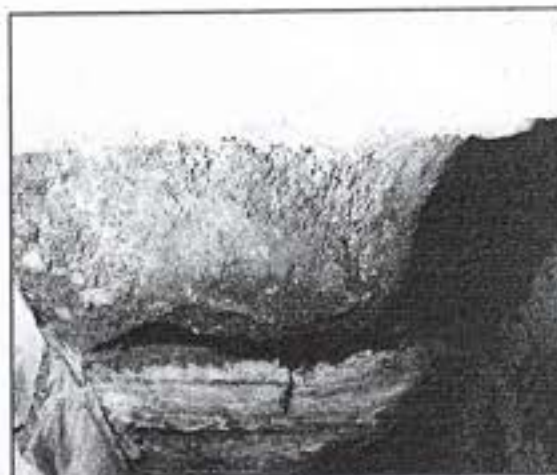
1. Existing floor level of this cellar is filled with soil.
2. In western side, starting from main entrance there are 5 numbers of pillars in which 4 numbers of pillars are made up of sandstone while 1 number pillar made up of brick.
3. Lime mortar is used as binding materials.
4. In the brick pillar have chamfered carvers.
5. Western side gallery, (S3) starting from 3rd pillar from the entrance side filled with soil and stone blocks up to 2-2.5 feet.
6. In the west side wall stone blocks are used as building materials, in this wall four openings filled are with stone slabs and debris.
7. South side wall closed has an opening to provide entrance to the cellar.
8. In the east side wall ancient brick and stone slabs used as building materials and lime mortar is used as binding materials.
9. Five numbers of openings (S1) are presently closed, brick arch is present on top.
10. Ceiling is damaged at northern most portion exposing the internal construction materials.



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Salt incrustation and deposition of soot on ceiling



Exposure of ceiling mortar due to loss of ceiling slab

Existing Structure (Central Hall)

(i) Construction Material

1. Sandstone blocks
2. Lime mortar
3. Lime plaster
4. Iron dowel/ clamps
5. Enamel paint
6. Wooden door with iron bars

(A) Central Hall

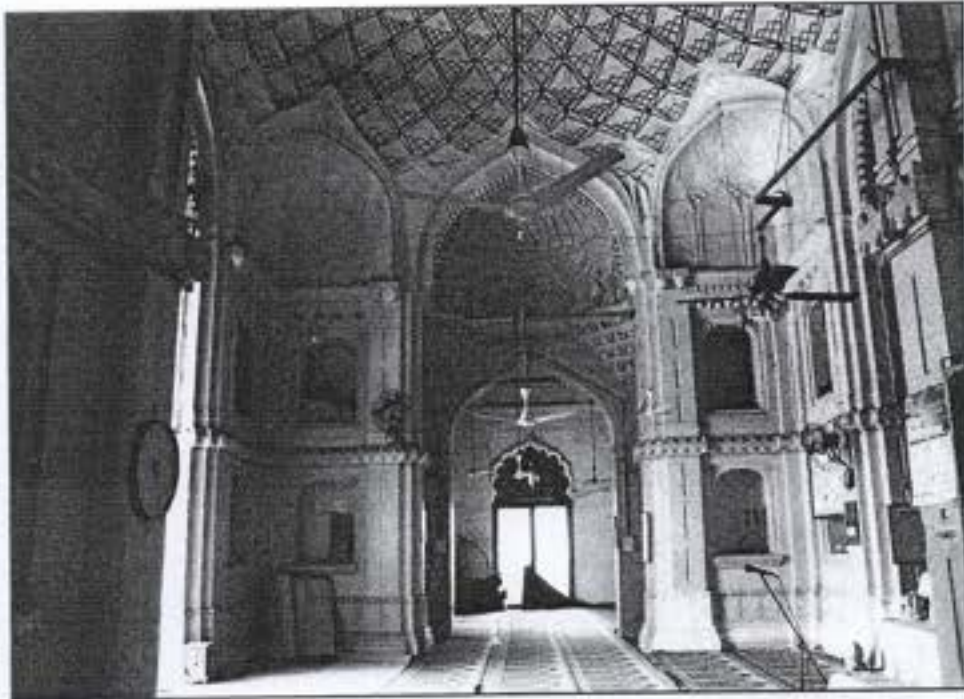
(i) Observations

1. Main structure is made up of sandstone blocks and carved stone pillars. The entire surface covered with thick lime wash and enamel paint in multiple layers making it difficult to recognize the exact building/ binding material. However, at the bottom area building/ binding materials can be identified through the paint.
2. Ceiling of central dome has geometrical designs which have been painted with dark brown and green colour.



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3. In the arch portion some stucco work has been done for the beautification.
4. Niches are present on the wall surface in two levels. There are 16 numbers of niches at the lower level, 8 niches at the upper level. Niches are almost same design.
5. The cornice of upper niches is absent, arch on all directions is well carved and of almost similar pattern/ designs.
6. Flooring is made up of modern stone slabs, cement punning is used for joint filling.



Area of the central hall

(B) North Hall

(i) Construction Material

1. Sandstone blocks



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2. Lime *surkhi* mortar
3. Lime plaster
4. Iron dowel/ clamps
5. Enamel paint
6. Wooden door with iron bars

(ii) Observations

1. This portion of inner hall is constructed with sandstone blocks and lime mortar. Entire surface is coated with multiple layers of lime wash and enamel paint.
2. Ceiling portion of dome has designs painted with dark brown and green colour.
3. In this hall niches are absent.
4. Floor is similar to the central hall.

(C) South Hall

(i) Construction Material

1. Sandstone blocks
2. Lime mortar
3. Lime plaster
4. Iron dowel/ clamps
5. Enamel paint
6. Wooden door with iron bars

(ii) Observations

1. This portion of inner hall is constructed with sandstone blocks and lime *surkhi* mortar. Entire surface is coated with multiple layers of lime wash and enamel paint.



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2. Ceiling of dome has been painted with dark brown and green colour.

3. Niches are absent in this hall.

4. This portion has doors opening to the east and north side, doors are constructed of wooden frame and iron bars.

5. Floor is similar to the central hall.

North Corridor

(i) Construction Material

1. Sandstone blocks
2. Lime mortar
3. Iron dowel/ clamps
4. Enamel paint

(ii) Observations

1. Entire portion is constructed with sandstone blocks and lime mortar as binding material. Surface of this portion is coated with multiple layers of lime wash and enamel painted.
2. Ceiling slabs are of large sized stone slabs, approx. 8 feet of length.
3. There are 3 numbers of stone pillars decorated with lotus buds and flower towards the north.
4. Stone slabs are used as flooring material and joints are filled with cement punning.



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(iii) Weathering of Built Materials

At the lower portion stone slabs problem of delamination. Natural breathing of built material may be affected due to thick enamel coating.

South Corridor

(i) Construction Material

1. Sandstone blocks
2. Lime *surkhi* mortar
3. Iron dowel/ clamps
4. Enamel paint

(ii) Observations

1. Ceiling slabs are of large size stone slabs, approx. 8 feet of length.
2. One large sized door with wooden frame and iron decorative grills opens to the south, while one small door opening toward east is present without any door frame and grill.
3. To the west there is a 2 storied store room.
4. To the south is a large fence made up of wooden frame and iron bars.
5. Flooring of this area is made up of stone slabs; joints are filled with cement punning.
6. Walls of this area is coated with multiple layers of lime.

East Corridor

(i) Construction Material



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1. Sandstone blocks
2. Lime mortar
3. Iron dowel/ clamps
4. Enamel paint

(ii) Observations

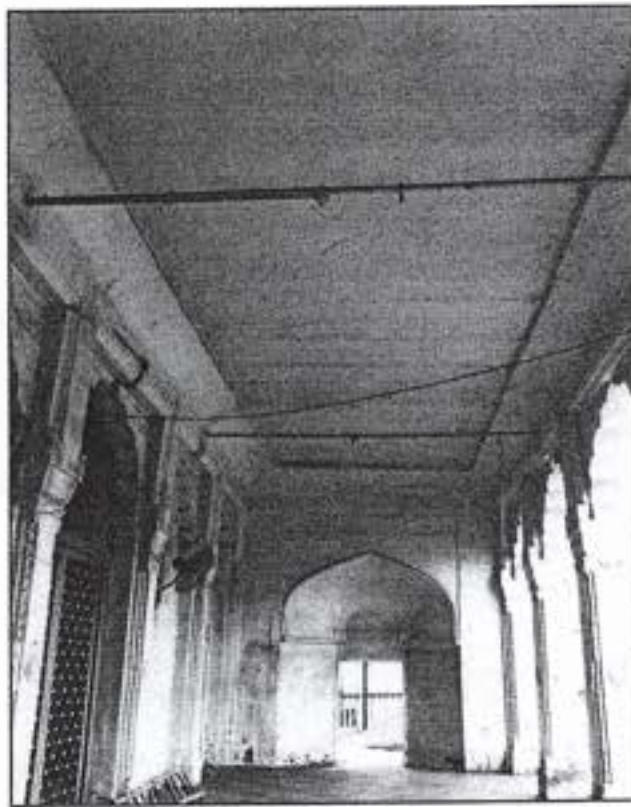
1. First open *varanda* beginning from north side is constructed on 12 numbers (6 numbers outside + 6 numbers adjacent to inner wall) of pillars and pilasters respectively.
2. All the stone pillars consist of 3 parts, lower pedestal, central shaft and upper part.
3. All the pillars are carved and have design of lotus buds and lotus flower, large sized lotus is present in full and half carved on the top and bottom.
4. Pedestal of some stone pillars are repaired with modern construction materials.
5. Pillars and walls are coated with lime and multiple layers are of enamel paint.
6. Stone used in this area are of different colour and texture, ceiling is made up of large sized stone slabs.
7. Floor of this portion is made up of sand stone slabs and joints have been filled with modern cementing materials.
8. Outer pillared hall toward east side beginning from south end is similar as north side verandah.

(iii) Weathering Impacts on Built Materials



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1. Lower portion of some pillars are exposed showing different weathering pattern like powdering, delamination, discoloration etc.
2. Due to thick coating of enamel paint on pillars and walls, breathing of built material may be affected.
3. Due to fixing of iron clamps/ nails/ iron bar, micro cracks and fractures have developed inside the structure.



East corridor



Façade and terrace of the Existing Structure

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(i) Construction Material

1. Sandstone blocks
2. Lime mortar
3. Iron dowel/ clamps
4. Lime coating

(ii) Observations

1. Super structure is built up of sandstone blocks. At both the end (north and south) two numbers of minarets are present.
2. Minarets on both ends stands on 4 pillared structures with four side opening.
3. The eastern face of the existing structure has the main entrance in the centre and arched entrance on either side.
4. Above the arches of pillars, *Chhajja* in two layers are present with brackets below.
5. Lime wash is done in multiple layers.
6. At some places stone is surface exposed due to flaking of lime wash/ painted coats.
7. The terrace has a central dome and one on either side. There are double domes.



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Outer exposed area of main structure

General Condition Assessment of South Cellars (13.60 x 5.60 m)

1. The stone pillars of cellar which support the open platform where prayers are performed by the community are deteriorated/ damaged which need replacement by new stone making of same after calculating of dead load and live load. Same may be applied to broken/ damaged beam and stone brackets, pillar capitals and pillar bases.
2. Ceiling stone slabs are badly damaged and flaking/ separating from lime concrete (approximate 45 cm. in depth) of roof due to seepage of rain water and vibration of live load. Due to this reason the strength of stone slabs is weak. They should be replaced by new stone slabs.
3. Due to dampness/ capillary action of water the stone pillar – pillar base have deteriorated and pulverized.
4. Some stone brackets are supported by wooden *balli* to check the deviation of bracket horizontally.
5. The mortar (*kankar* lime) which is used in cellar/ basement are likely to be weaker in strength which needs to be tested in laboratory to check the strength of mortar.
6. Lime concrete which is laid over stone slab roof is also approximately in dead condition.



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7. From the entrance of cellar, to the left 4 brackets are cracked which is dangerous. It may not bear any additional self-load, dead load and vibration of top of roof (live load).

8. At present, approx. 1.50 m in height, construction materials/ stone pieces mixed with soil are dumped in cellar which needs to be removed for actual condition assessment of structure.

9. Before removal of dumped construction materials/ stone pieces mixed with soil all the safety measures should be followed for the safety of structure and workers.

10. On both sides, all the four stone pillars and capitals are of uneven in size.

11. Total 9 openings of approximately same size are existing which are packed/ filled by dump material like stone pieces and soil.

12. In ceiling, stone slabs and dead mortar are flaking of from joints and gapping is seen in the joints between them.

13. From entrance left side first beam is in two pieces which are not resting properly on brackets.

Left Side of Cellar (S2)

1. Stone beam is cracked/ partially damaged on brick pillar near entrance.

2. At entrance of cellar stone bracket is damaged and tilted.

3. In 2nd number stone pillar, brackets are made of two pieces of stone and the joints are open between them.



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4. 3rd number stone pillar bracket is also made in two pieces of stone which is partially damaged and beams are also damaged from top.

5. 4th number stone pillar bracket which is made of one stone is damaged/ cracked longitudinally along the bracket.

6. Near fourth number pillar three numbers stone ceiling slab are missing and lime concrete roof is also falling down and 7 number ceiling stone slabs are badly damaged which are in hanging position. They may collapse any time by any movement on roof terrace by vibration.

7. All the four stone pillars are partially damaged/ deteriorated due to capillary action of water and dumped material of stone and soil.

8. In between 1st pillar and 2nd pillar and 4th pillar the ceiling stone slab are damaged and missing.

Right Side of Cellar (S2)

1. On the entrance, the beam is broken which is supported by the modern brick pillar.

2. The stone beams are not properly connected with each other by iron dowels. On 4th number pillar the beam joints have widened. The joint gap is filled by the bricks/ stone with mortar.

3. 3rd and 4th numbers of stone brackets are partially damaged and tilted which is made in two pieces of stone.

4. Stone bracket number one and two are made in one pieces of stone and are partially damaged.

5. Stone joint between the pillar and pillar capital are partially damaged and mortar missing from the joints.



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6. All the four pillars are partially damaged due to capillary action of water and dumping materials/ stone/ loose soil.
7. Ceiling stone slabs near the entrance and 1st number stone pillar and brick pillar are damaged.
8. All the four stone pillars and capital are of uneven in size.

North Cellar (14.0 x 5.6 m)

1. The stone pillar of basement/ cellar support the roof. On the roof prayer is performed by the community. In the basement total 8 no. stone beams which bear the load and 4 no. brick pillar and 2 number stone pillar, which are weak, are used to support upper structure like roof, beam and live load.
2. Total 10 no. stone beams are used which are not of similar shape and thickness (approximate size of beam is 30 x 40 cm). The support is also provided by brick and stone pillars where beams are cracked/ partially damaged. Right side beam number 5 is tilted. The clamping of the joints of beams is not properly done.
3. Stone brackets are made in two pieces of stones. Some stone brackets are not straight but tilted.
4. Stone pillar capitals are of different size which support the stone brackets, which are also partially damaged.
5. Stone slabs of ceiling are not of proper size. Different sizes of stone slabs are used and ceiling surface is uneven. All the joints of stone slabs of ceiling are not filled properly. A gap is seen in between stone slabs as mortar is missing from the joints. At the entrance, near pillar number 1, a ceiling stone is missing and lime concrete of the ceiling is seen. Last slab near pillar number 4 is tilted.



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6. Near pillar number 4 from southeast wall, water seepage is noticed.

7. The dump *malba* (building material and soil like stone pieces, brickbats, dead mortar, etc.) should be removed up to floor level to check the strength of base of the structure.

8. There are 4 numbers open passages to enter/ connect the cellar N3.

9. Pillar number 5 where the beam is tilted and supported by the brick pillar right side ceiling stone slab has fallen down and lime concrete of roof is also fallen. Such areas are in danger of further damage and from this place other ceiling stone slabs are cracked. They may collapse by vibration/ heavy movement on the terrace.

10. All the pillars are wet/ fully moisturized due to dampness/ capillary action of water. The pillars are deteriorated from both the sides.

11. Eastern side main wall of cellar is made of Lakhaury bricks using lime *surkhi* mortar.

12. Western side main wall is made of stone masonry with *kankar* lime mortar.

Cellar N3 (12.40 x 2.92 m)

1. The three number arches are provided to support the structure which is made of Lakhaury bricks with lime *surkhi* mortar and ceiling is also made of brick and plaster with white wash.

2. On the arches, on which the structure is supported, cracks have developed. Cracks are also noticed on the ceiling. Due to these cracks the structure is getting weak. If the live load/ vibration/ movement increase on the roof, the structure may get damaged at any time.



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Field Laboratory



Field Laboratory

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Importance

Field laboratory is essential while clearance/ scientific survey for collection of artefacts and further analysis immediately to identify any potential issues regarding scientific treatment and preservation in accurate manner along with reducing the time, cost and last but not least deterioration rate. In short, "The laboratory in the field provides first aid to the new finds."

Establishment of field laboratory helps in taking initial steps related to photo-documentation, analyse of artefacts and further study of material or culture. When artefacts found from in the field/ historical sites, they needs to be cleaned, sorted, catalogued, stabilized and labelled. For these purposes field laboratory is essential at the site.

After cleaning, labelling, classification and slight restoration fragile and deteriorated objects are prepared for transportation to main laboratory where all the rest of detailed restoration and analysis is to be done. Hence field laboratory plays a vital role in the field of archaeology.

Scientific Survey

During the clearance of debris, 64 copper coin, 4 iron objects (part of clamp) and 1 other metal object were found which were further scientifically treated and preserved. In this regard a field laboratory was established in the same premises.

1. Copper

An alloy made of copper are mainly bronze and brass which mainly contains copper, tin and zinc to which small quantities of lead, arsenic and some other elements.



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However, even such durable cultural properties that have been preserved for hundreds of years have not escaped the effect of rain, moisture and other atmospheric pollution.

Conservation Problems

As copper is more sensitive towards oxygen thus, these objects/ coins are covered with a thin film of oxide which gives a dull appearance to the copper coins. At some places green and blue colour encrustation has been noticed. Due to presence of moisture and dampness, and due to smoke as copper shows it's sensitivity towards sulphur, coins are covered with film of tarnish consisting of copper sulphide. Hard calcareous deposition on some coins has also been found.

Conservation Method

Removal of dust and dirt was done by using dry brushing gently. For removal of salt, coins were treated with alkaline solution of Rochelle salt by dissolving Sodium Hydroxide and Sodium Potassium Tartrate in the appropriate ratio (1:3). For removal of calcareous/ hard deposition, 5% solution of Sodium hexameta phosphate was applied. After removal of accretions and depositions coins were rinsed with the distilled water.

After clearing of copper coins, application of preservation coat has been made/ done by applying polyvinyl acetate with sulphur free toluene in 0.5%.

2. Iron

Iron objects (parts of clamp) which were found during the clearance of debris provide some of the most intractable problems for the chemists because of the variety and complexity of their corrosion products. Iron corrodes easily, the corrosion products are unsightly, and the swelling and deformation of the objects may be severe.

Conservation Problem

Typical appearance of iron objects mainly found at the time of clearance from the damp sites or from the acute moisture places. The mass is composed of Iron oxides and carbonates Iron objects were readily attacked by oxygen in the



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presence of moisture to form rust-derived from the characteristics orange and red compounds that appear as the first products of corrosion.

Conservation Method

At first, dry brushing was done gently to remove dust and dirt from the objects. Electrochemical reduction has been done by using zinc and caustic soda. Caustic soda treatment was carried out by using caustic soda (not more than 1%) in distilled water in successive bath.

After conservation, application of polyvinyl acetate with sulphur free toluene was done as a preservation coat.

3. Lead

One object of lead was found during the clearance of debris. Lead is a white metal and also twice heavy as compare to tin.

Conservation Problem

The object was not so acute corroded. The corrosion product of lead is the basic carbonate which is also white and leads to disfigurement. Dust and dirt deposition have been observed which needs chemical treatment thereon.

Conservation Method

By using dry brushing gently, dust and dirt were removed from the surface of the object. Then ammonical solution has been applied for cleaning purpose for removal of unwanted accretionary deposits.





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Relative Humidity and Temperature

The relation between humidity and temperature is inversely proportional. If temperature increases, it will reduce relative humidity, thus the air will become drier. When the temperature decreases, the air will become wetter; therefore, the relative humidity will increase.

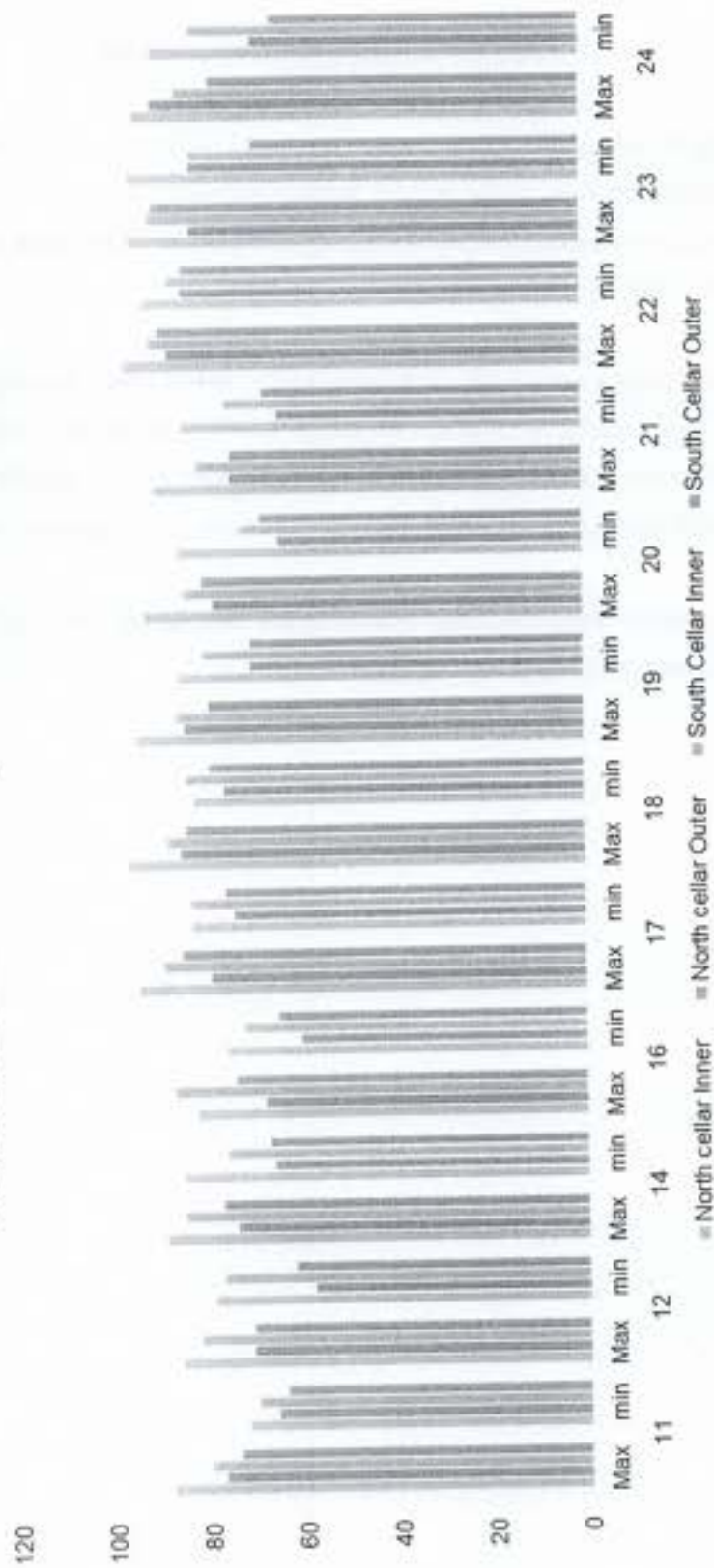
The data of relative humidity and temperature have been recorded during the period in north cellar and south cellar of the premises. RH and Temp. was measured every hour during working period. Readings were regular in cellar S2, being it open but same was taken in cellar N2 when it was opened for work.

Based on hourly readings daily average was calculated which is compared in monthly tables and presented in graphs.





Average data of Relative Humidity for the month of August, 2023



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Average data of Relative Humidity for the month of August, 2023

Date		North Cellar		South Cellar	
		Inner	Outer	Inner	Outer
11	Max	88	77	80	74
	min	72	66	70	64
12	Max	86	71	82	71
	min	79	58	77	62
14	Max	89	74	85	77
	min	85	66	76	67
16	Max	82	68	87	74
	min	76	60	72	65
17	Max	94	79	89	85
	min	83	74	83	76
18	Max	96	85	88	84
	min	82	76	84	79
19	Max	94	84	86	79
	min	85	70	80	70
20	Max	92	78	84	80
	min	85	64	72	68
21	Max	90	74	81	74
	min	84	64	75	67
22	Max	96	87	91	89
	min	92	84	87	84
23	Max	95	82	91	90
	min	95	82	82	69
24	Max	94	90	85	78
	min	90	69	82	65





Average data of Relative Humidity for the month of September, 2023



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357

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Average data of Relative Humidity for the month of September, 2023

Date		North cellar		South Cellar	
		Inner	Outer	Inner	Outer
1	Max	-	-	89	72
	min	-	-	84	55
2	Max	-	-	87	65
	min	-	-	82	49
3	Max	-	-	86	66
	min	-	-	80	47
4	Max	-	-	88	74
	min	-	-	83	50
5	Max	-	-	88	80
	min	-	-	84	65
6	Max	-	-	92	85
	min	-	-	87	68
7	Max	-	-	-	-
	min	-	-	-	-
8	Max	-	-	90	80
	min	-	-	87	79
9	Max	96	80	92	87
	min	93	75	85	70
10	Max	-	-	94	85
	min	-	-	88	78
11	Max	96	86	92	81
	min	92	74	86	74
12	Max	-	-	94	89
	min	-	-	87	82
13	Max	-	-	94	87
	min	-	-	90	75
14	Max	-	-	94	88
	min	-	-	88	75

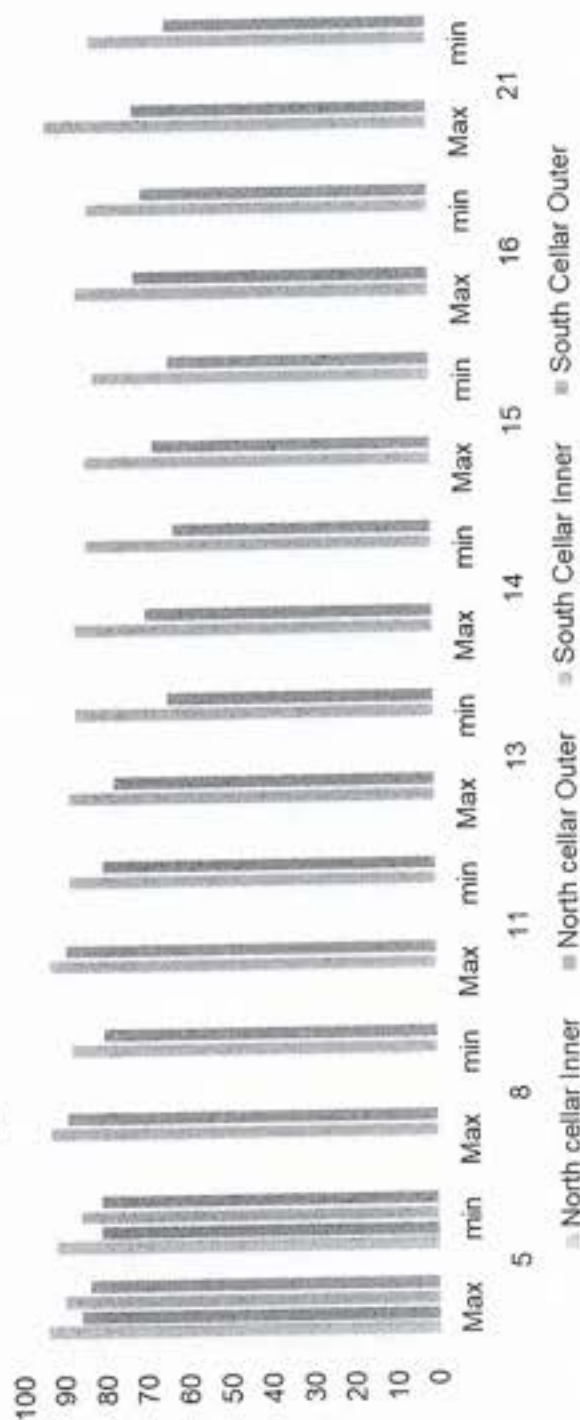


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15	Max	-	-	92	86
	min	-	-	89	78
16	Max	96	84	92	86
	min	91	79	89	78
17	Max	97	77	93	84
	min	92	70	86	73
18	Max	94	80	92	81
	min	92	70	87	69
19	Max	-	-	94	84
	min	-	-	87	76
20	Max	-	-	93	86
	min	-	-	89	71
21	Max	-	-	91	82
	min	-	-	89	67
22	Max	97	91	91	91
	min	93	80	87	81
23	Max	99	92	92	90
	min	94	84	90	82
24	Max	95	91	93	89
	min	89	84	88	80
25	Max	-	-	93	89
	min	-	-	88	80
26	Max	-	-	94	91
	min	-	-	87	80



Average data of Relative Humidity for the month of October, 2023



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Average data of Relative Humidity for the month of October, 2023

Date		North Cellar		South Cellar	
		Inner	Outer	Inner	Outer
5	Max	94	86	90	84
	min	92	81	86	81
8	Max	-	-	93	89
	min	-	-	88	80
11	Max	-	-	93	89
	min	-	-	88	80
13	Max	-	-	88	77
	min	-	-	86	64
14	Max	-	-	86	69
	min	-	-	83	62
15	Max	-	-	83	67
	min	-	-	81	63
16	Max	-	-	85	71
	min	-	-	82	69
21	Max	-	-	92	71
	min	-	-	81	63



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Scientific Investigation/ Survey at
Settlement Plot No. 9130, District Varanasi

(Report submitted to the Hon'ble District Court, Varanasi)

Prof. Alok Tripathi

with contributions from

Dr Goutami Bhattacharya, Dr Shubha Majumder, Dr Raj Kumar Patel,
Dr Abinash Mohanty, Dr Izhar Alam Hashmi, Dr Aftab Hussain,
Dr Niraj Kumar Mishra, Dr Vinay Kumar Roy

Archaeological Survey of India
2023



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Scientific Investigation/ Survey at
Settlement Plot No. 9130, District Varanasi

(Report submitted to the Hon'ble District Court, Varanasi)

Volume 3

Objects

Archaeological Survey of India
2023



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264

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Artefacts





- LMS/27
367
- Acc. No. 003
1. Object Terracotta Figurine
 2. Material Terracotta
 3. Date / Period Medieval
 4. Location Cellar S2
 5. Measurement Height: 5 cm
Width: 2.5 cm
Thickness: 1.5 cm
 6. Description Broken piece of an unidentified terracotta figurine. It has a small hole on one side. The figurine is made from mould as it is hollow within.
 7. Condition Good



- 404.75
368
- | | |
|------------------|--|
| Acc. No. | 004 |
| 1. Object | Inscribed Slab |
| 2. Material | Marble |
| 3. Date / Period | Modern |
| 4. Location | Cellar S2 |
| 5. Measurement | Height: 16 cm
Width: 9 cm
Thickness: 2.5 cm |
| 6. Description | Broken part of a marble slab inscribed two letters. One is not clear and another one is written 'Shri' (श्री) in Devnagari script. |
| 7. Condition | Good |



- Acc. No. 005
1. Object Inscribed Slab
2. Material Marble
3. Date / Period Modern
4. Location Cellar S2
5. Measurement Height: 15.5 cm
Width: 9 cm
Thickness: 2 cm
6. Description Broken part of a marble slab inscribed with 'Ram' (राम) in Devnagari script and painted with black.
7. Condition Good



- 610431
370
- Acc. No. 006
1. Object Sculpture of Hanuman [3 parts]
2. Material Marble
3. Date / Period Modern
4. Location Eastern side of the Cellar S2
5. Measurement Height: 36 cm
Width: 23 cm
Thickness: 2 cm
6. Description The top piece depicts the crowned head of Hanuman and the mace head. The second piece depicts the body, except the feet. The right hand folded at the elbow holds the mace, left hand is missing. The neck is adorned with necklace. Waist band, sash and shawl is clearly seen. The third piece depicts the left feet broken at the ankle.
7. Condition Good



- Acc. No. 007
1. Object Seated human figure with rosary
2. Material Marble
3. Date / Period Modern
4. Location Eastern side of the Cellar S2
5. Measurement Height: 13.5 cm
Width: 15 cm
Thickness: 7 cm
6. Description The extant part depicts the right leg folded at knee and placed on the pedestal. The right hand holding a rosary is placed on the right knee.
7. Condition Good



- Acc. No. 008
1. Object Bust of deity
2. Material Marble
3. Date / Period Modern
4. Location Eastern side of the Cellar S2
5. Measurement Height: 6 cm
Width: 9.5 cm
Thickness: 5 cm
6. Description The extant part depicts the headless torso of four armed deity with left hands in various stages of breakage. The lower left hand is broken at the elbow, the upper left is bent at the elbow and raised up. The palm is broken.
7. Condition Good

40438
372



- Acc. No. 009
1. Object Sculpture of Krishna
2. Material Sandstone
3. Date / Period Late Medieval
4. Location Eastern side of the Cellar S2
5. Measurement Height: 15 cm
Width: 8 cm
Thickness: 5 cm
6. Description The extant part depicts a headless male deity. Both the hands are broken, but the right hand appears to be raised. The left hand appears to go over the body. The right leg is extant above the knee. The left leg is broken at the hip. Based on the posture and iconographic features, it appears to be an image of Lord Krishna. He is depicted wearing necklace, *yajnopavita* and *dhoti*.
7. Condition Good



- Acc. No. 010
1. Object Yonipatta
2. Material Sandstone
3. Date / Period Medieval
4. Location Eastern side of the Cellar S2
5. Measurement Length: 24 cm
Height: 6 cm
Width: 16 cm
6. Description Yonipatta is circular at one end and tapering on the other end. There is a circular depression towards the circular end for the placement of the Shiva *linga*. A snake figure is depicted length wise on the tapering end. There are two tenons on either side of the tapering sides for fixing.
7. Condition Good.

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374



- Acc. No. 012
1. Object *Makara*
2. Material Stone
3. Date / Period Late Medieval
4. Location Eastern raised platform of the Cellar S2
5. Measurement Length: 42 cm
Height: 24 cm
Width: 12 cm
6. Description The *makara* is depicted in seated posture on a pedestal with its raised snout. Scales on the body shown are similar to fish scales. The partially open mouth depicts pointed canines and teeth. The upraised tail is broken. The right foreleg and the pedestal below is also broken.
7. Condition Good

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375



- Acc. No. 013
1. Object Pestle
2. Material Sandstone
3. Date / Period Late Medieval
4. Location Eastern side of the Cellar S2
5. Measurement Height: 11 cm
Diameter: 6 cm
6. Description Pestle with smooth finish. Circular depression at the top and two near the base. Cross-section is plano-convex.
7. Condition Good.

210457
37-6



- Acc. No. 021
1. **Object** Sculptural fragment
2. **Material** Sandstone
3. **Date / Period** Early Medieval
4. **Location** Western part of the Cellar S2
5. **Measurement** Height: 43 cm [with pillar part] / 24 cm [without pillar part]
Width: 34 cm
Thickness: 16 cm
6. **Description** The extant part depicts two human busts. The figure on the right appears to hold aloft a parasol depicted over the head of the crowned figure to the left. The features are severely abraded and hampers identification.
7. **Condition** Abraded and chipped off
- 40608
377



- Acc. No. 026
1. Object Sculpture of Hanuman
2. Material Marble
3. Date / Period Modern
4. Location Northwest side
5. Measurement Height: 21.5 cm
Width: 16 cm
Thickness: 5 cm
6. Description The extant part depicts the bottom half of a sculpture of Hanuman. The left leg bent at the knee is placed on a rock. The right leg is firmly planted on the ground.
7. Condition Good

21044
378



- Acc. No. 028
1. Object Sling ball
 2. Material Terracotta
 3. Date / Period Medieval
 4. Location Northwest side
 5. Measurement Diameter: 2.5 cm
 6. Description Sling ball red in colour.
 7. Condition Good.

40432
379



- Acc. No. 029
1. Object Sculpture of Apasmarapurusha
2. Material Sandstone
3. Date / Period Early Medieval
4. Location Northwest side
5. Measurement Height: 7 cm
Width: 9 cm
6. Description The extant fragment depicts the *apasmarapurusha* part of a sculpture. The left foot is over the body of the *apasmarapurusha*. A lotus pedestal is depicted below. His head faces front and his hair is delineated with parallel incised lines. He is depicted crouching on the lotus pedestal below. The base of the pedestal has a rectangular tenon for fixing.
7. Condition Good

4043r
380



- Acc. No. 030
1. Object Quern
2. Material Sandstone
3. Date / Period Medieval
4. Location Eastern platform of the Cellar S2
5. Measurement Height: 18 cm
Diameter: 30 cm
6. Description An oval concave quern used for grinding purpose. It has smooth finish inside.
7. Condition Good

4048
381



- Acc. No. 035
- 4042
302
1. **Object** Female figurine
 2. **Material** Terracotta
 3. **Date / Period** Modern
 4. **Location** Southeast side
 5. **Measurement** Height: 8 cm
Width: 5.5 cm
Thickness: 2.5 cm
 6. **Description** Terracotta figurine of a female sitting in cross-legged posture. She is adorned with necklace and garland. She also has decorated halo around her head. The cushions and pedestal are broken.
 7. **Condition** Good



- Acc. No. 040
1. Object Pestle
2. Material Sandstone
3. Date / Period Late Medieval
4. Location Northwest side
5. Measurement Height: 11 cm
Width: 6 cm
6. Description Cylindrical pestle, broken at one end. Cross-section is plano-convex.
7. Condition Good

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323



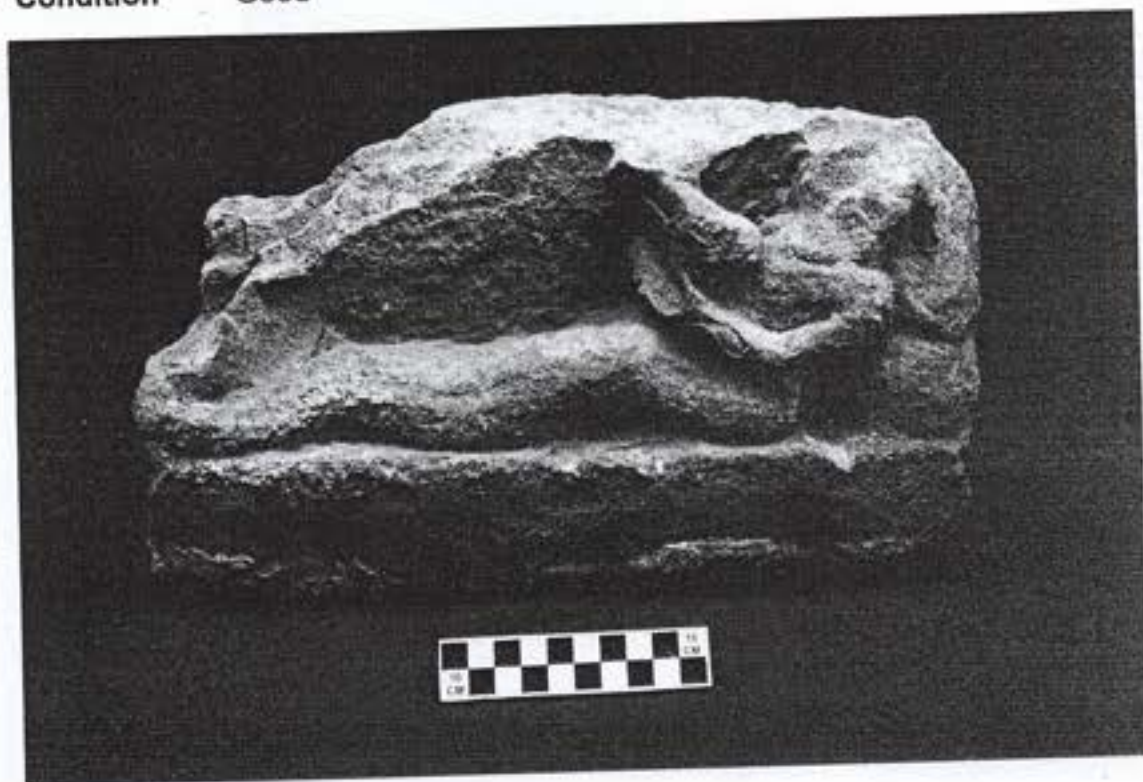
- Acc. No. 041
1. Object Human figurine
2. Material Terracotta
3. Date / Period Medieval
4. Location Cellar N2
5. Measurement Height: 6 cm
Width: 5 cm
Thickness: 2.5 cm
6. Description Extant part depicts a headless torso broken at the waist. Both the hands are also missing. It is hollow from within.
7. Condition Good

40437
384



- Acc. No. 042
1. Object Sculpture of *Bhu-Varaha*
2. Material Sandstone
3. Date / Period Early Medieval
4. Location On the western side of the Cellar N2
5. Measurement Height: 35 cm
Width: 22 cm
6. Description The extant part depicts the lower part of a sculpture. A half human half snake figure is depicted on the pedestal. He is depicted holding the left leg of the central figure possibly *Varaha avatara*. The right leg is placed on the tail of the snake. Two square sockets are seen on the pedestal for fixing.
7. Condition Good

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385



- Acc. No. 043
1. Object Sculptural fragment
 2. Material Sandstone
 3. Date / Period Medieval
 4. Location Southwest side
 5. Measurement Height: 14 cm
Width: 12 cm
 6. Description A broken piece of a left hand bent at the elbow and raised up. The palm is missing. Folds of the drapery are visible on the upper arm and on the stele below the arm.
 7. Condition Good

4047
386



- Acc. No. 044
1. Object Shiva *linga*
 2. Material Sandstone
 3. Date / Period Modern
 4. Location Western Chamber
 5. Measurement Height: 6.5 cm
Diameter: 3.5 cm
 6. Description A broken piece of a cylindrical stone object with convex top, most probably a Shiva *linga*. It is broken at the base and some chipping marks can be seen on the top and side.
 7. Condition Good

410432
307



- Acc. No. 045
1. Object Sculptural fragment
 2. Material Terracotta
 3. Date / Period Medieval
 4. Location Western Chamber
 5. Measurement Height: 4.3 cm
Thickness: 1.6 cm
 6. Description The extant part depicts the right palm placed on the pendant right leg. The wrist is adorned with a bangle. The folds of the *dhoti* are seen on the extant right leg.
 7. Condition Good

40458
308



- Acc. No. 046
1. Object Sculpture of Vishnu
2. Material Sandstone
3. Date / Period Early Medieval
4. Location Western side of the Cellar S2
5. Measurement Height: 27 cm

Width: 17 cm

Thickness: 15 cm

6. Description Broken part of a back-slab (*parikara*) of an Brahmanical image. The extent part exhibits the image of four-handed crowned and bejewelled Vishnu seated in *ardhyaparyanksana* posture. The upper right hand holds the gada, the lower right hand is broken at the palm. The upper left hand has a chakra and lower left hand has shankha. Flying vidyadhara couple is seen on the top and a standing attendant figure to the extreme left. His right hand is raised above the head. Right leg is bent at the knee and upraised.

7. Condition Good



- Acc. No. 047
1. Object Sculpture of Ganesha
2. Material Marble
3. Date / Period Late Medieval
4. Location Western side of the Cellar S2
5. Measurement Height: 12 cm
Width: 8 cm
Thickness: 5 cm
6. Description The extant part depicts the crowned head of Ganesha. The trunk is turned to the right. The eyes are visible. Part of the left tusk is also extant.
7. Condition Good

4042r
390



- Acc. No. 048
1. **Object** Sculpture of a female deity
2. **Material** Sandstone
3. **Date / Period** Late Medieval
4. **Location** Western Chamber
5. **Measurement** Height: 13 cm
Width: 8 cm
Thickness: 4 cm
6. **Description** Image of female (deity) seated on a high pedestal. The two hands are placed before the chest. Head is no more extant. A crouching animal figure is depicted on the pedestal in the centre.
7. **Condition** Good

40457
391



- Acc. No. 049
1. **Object** Fragment of an Elephant
 2. **Material** Sandstone
 3. **Date / Period** Medieval
 4. **Location** Western Chamber
 5. **Measurement** Height: 13 cm
Width: 13 cm
Thickness: 10 cm
 6. **Description** The extant defaced fragment of a kneeling elephant. It is the end piece of decorative floral motif depicted on the underside of the cusped arch of the south entrance facing north. It was found with the debris accumulated directly below the arch.
 7. **Condition** Good.

40458
392



- Acc. No. 050
1. Object Sculpture of Hanuman
2. Material Marble
3. Date / Period Late Medieval
4. Location Western side of the Cellar S2
5. Measurement Height: 10 cm
Width: 20 cm
Thickness: 7 cm
6. Description The extant part depicts the lower part of the image of Hanuman. Only the two feet are present. The left one is placed on a rock and the right is placed on the ground.
7. Condition Good

4042r
393

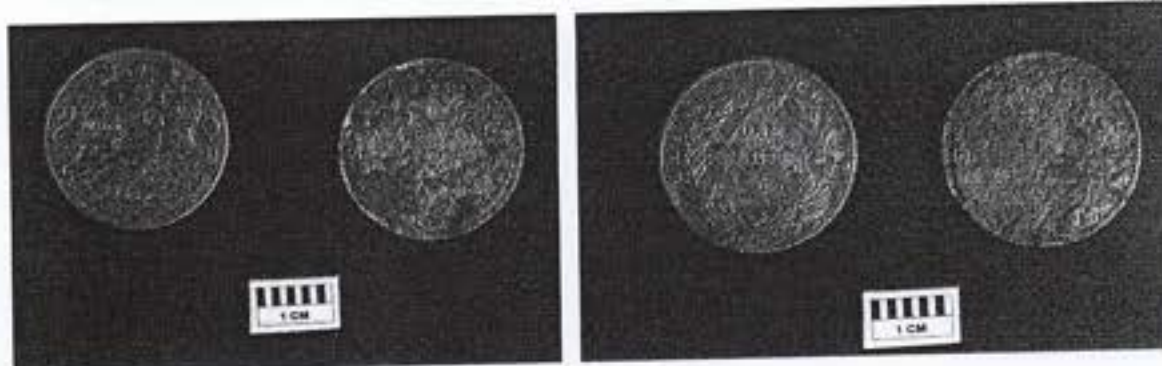


- Acc. No. 054
1. Object Female figurine
 2. Material Terracotta
 3. Date / Period Late Medieval
 4. Location Northwest side
 5. Measurement Height: 8 cm
Width: 3 cm
Thickness: 7 cm
 6. Description A broken portion of a female figurine. She is wearing a *sari* and ornaments. The head of the figurine is covered with *sari*. The face is weathered. The hollow figurine is broken below the waist. The right hand is broken at the shoulder while the outstretch left hand broken below the elbow.
 7. Condition Good

40432
394

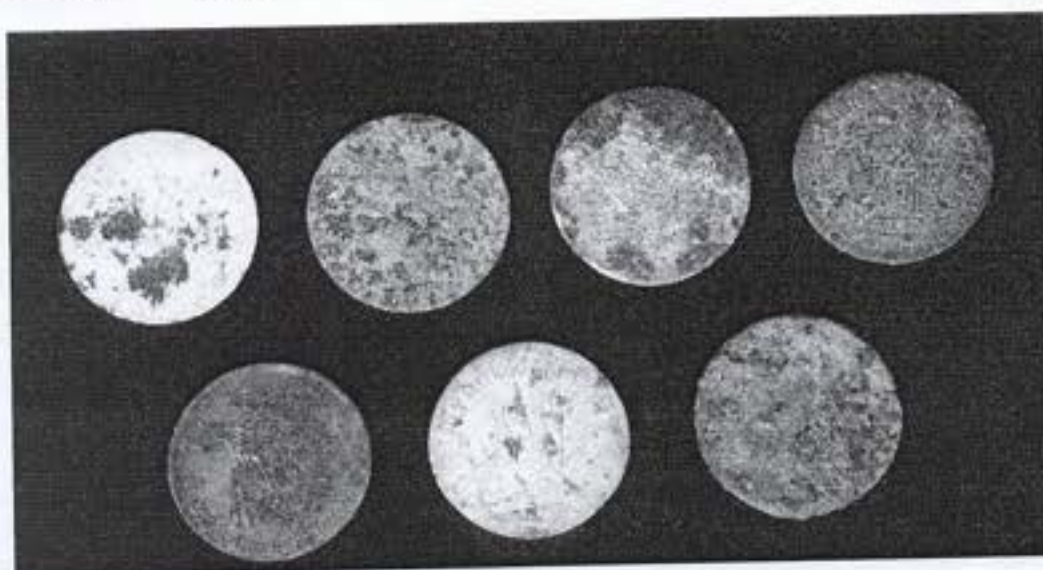


- Acc. No. 055
1. Object Coins (2)
2. Material Copper
3. Date / Period 1835 CE
4. Location Northwest side
5. Measurement Diameter: 2.5 cm (both the coins)
6. Description Two copper coins. One completely weathered and another one is British period coin.
- Obverse - Coat of arms of East India Company, a shield quartered with escutcheon of France and England in the first quarter; crest of a lion rampant guardant holding between his forepaws the imperial crown proper; with supporters two lions rampant guardant each supporting a banner charged with a cross and written 1835 date of the issue of this coin.
- Reverse - One Quarter Anna and around above written East India Company.
7. Condition Good



- Acc. No. 056
1. Object Tokens (7)
 2. Material Metal
 3. Date / Period Modern
 4. Location Northwest side
 5. Measurement Diameter: 3.1 cm (all the tokens)
 6. Description 7 Tokens of the modern Annapurna Temple within the Kashi Vishwanath temple complex.
 7. Condition Good

40427
396



- Acc. No. 057
1. Object Male figurine
2. Material Terracotta
3. Date / Period Late Medieval
4. Location Northwest side
5. Measurement Height: 6.5 cm
Width: 2 cm
Thickness: 2.5 cm
6. Description A standing figure of a headless man. Both the hands are broken. He is draped in a long tunic and *dhoti* and waist band. Legs are broken from the knees.
7. Condition Good

11000F
397



- U042r
398
- | | |
|------------------|--|
| Acc. No. | 058 |
| 1. Object | Male figurine |
| 2. Material | Terracotta |
| 3. Date / Period | Late Medieval |
| 4. Location | Northwest side |
| 5. Measurement | Height: 7 cm
Width: 2.5 cm
Thickness: 4 cm |
| 6. Description | Seated male figurine with outstretched leg. The left leg is missing. The forehead is adorned with a beaded ornament. Both the arms are broken at the shoulder. |
| 7. Condition | Good |



- Acc. No. 059
1. **Object** Sculptural fragment
2. **Material** Marble
3. **Date / Period** Late Medieval
4. **Location** Eastern part of the Cellar S2
5. **Measurement** Height: 4 cm
Width: 3 cm
Thickness: 7.5 cm
6. **Description** The extant fragment depicts the fisted palm and a part of the right hand above the wrist. A bangle is seen on the wrist.
7. **Condition** Good

410408
399



- Acc. No. 060
1. Object Shiva *linga*
 2. Material Sandstone
 3. Date / Period Late Medieval
 4. Location Eastern part of the Cellar S2
 5. Measurement Height: 7 cm
Diameter: 3.5 cm
 6. Description Broken part of a Shiva *linga*. The extent is cylindrical top part of Shiva *linga*.
 7. Condition Good

40433
400



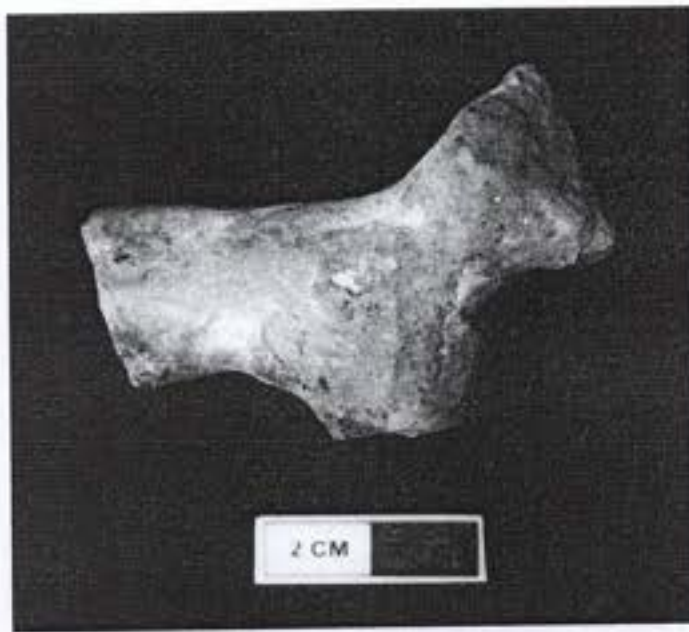
- Acc. No. 061
1. Object Shiva *linga*
2. Material Glass
3. Date / Period Late Medieval
4. Location Western part of the Cellar S2
5. Measurement Height: 3 cm
Width: 3 cm
Thickness: 7.5 cm
6. Description Shiva *linga* with *yonipatta*. The *linga* and the *yonipatta* both are partially damage.
7. Condition Good

010438
401



- Acc. No. 062
1. Object Animal figurine
 2. Material Terracotta
 3. Date / Period Late Medieval
 4. Location Northwest side
 5. Measurement Height: 3 cm
Width: 5 cm
 6. Description Broken image of an animal. The fore limbs are broken and hind part is missing. Snout and ears are noticeable.
 7. Condition Good

40427
402



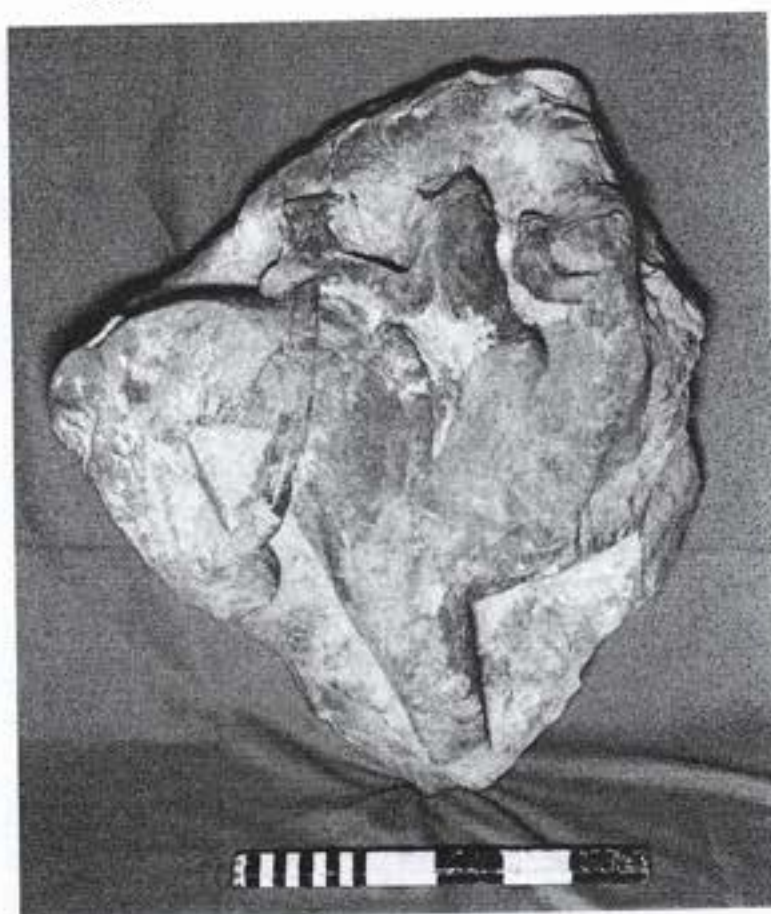
- Acc. No. 063
1. Object Pestle
2. Material Sandstone
3. Date / Period Late Medieval
4. Location Western part of the Cellar S2
5. Measurement Height: 6.5 cm
Diameter: 2.5 cm
6. Description Pestle with smooth finish and conical shape. One side is pointed and the other is convex.
7. Condition Good



- 40408
404
- | | |
|------------------|---|
| Acc. No. | 064 |
| 1. Object | Animal figurine |
| 2. Material | Terracotta |
| 3. Date / Period | Late Medieval |
| 4. Location | Northwest side |
| 5. Measurement | Height: 4 cm
Width: 6 cm |
| 6. Description | Head part of an animal figurine. Upper portion of the head is broken and inner parts are hollow suggesting it was mould-made. But the joint is finally merged. Ears at both the side are made by pinching. No other facial details are visible. It is pinkish in colour and well fired. |
| 7. Condition | Good |



- Acc. No. 065
1. Object Horse rider
2. Material Sandstone
3. Date / Period Medieval
4. Location Western side of the Cellar S2
5. Measurement Height: 57 cm
Width: 47 cm
Thickness: 13 cm
6. Description The sculpture of horse riders. In this image two rider, probably male and female seated over a horse. The face and the back part of the horse is damaged and the face of the both the figure and the lower part are mutilated. The image is also weathered and as a result the details of the image are not clearly seen.
7. Condition Good



- Acc. No. 066
1. Object *Dwarpala*
 2. Material Sandstone
 3. Date / Period Early Medieval
 4. Location Western side of the Cellar S2
 5. Measurement Height: 58 cm
Width: 28 cm
Thickness: 16 cm
 6. Description The image is carved on one side of a *dwarashakha*. The central figure is standing in *tribhanga* pose. The right hand is in *abhaya mudra* while the left hand is akimbo. Hair is arranged in *jatajuta* and flows down to the shoulder. The figure is adorned with ear ornament beaded necklace. The waist band is depicted in a tangent from right to left. The left side of the face of central figure is mutilated. Near the right leg is depicted a smaller image whose face is mutilated. A *gana* figure is depicted near the left leg. There are two sockets in the front of the pedestal for fixing. On the adjacent face of the right is the depiction of *purnaghata* motif.
 7. Condition Good

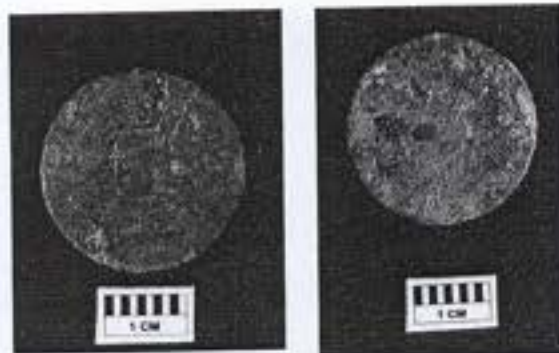


- 4042R
46
- Acc. No. 067
1. Object Sculpture of Vishnu
2. Material Sandstone
3. Date / Period Early Medieval
4. Location Western side of the Cellar S2
5. Measurement Height: 50 cm
Width: 30 cm
Thickness: 18 cm
6. Description The four-armed deity stands in *samapadaasthanaka* posture on *triratha* pedestal. Out of four, three hands of the Vishnu and the face is badly damaged. In the remaining lower left hand, he holds the *gada*. He is wearing usual ornaments and *vanamala* is clearly visible. Attendant is depicted to the left of the central deity and has a *vanamala*. To the right of the deity is a devotee standing with folded hands.
7. Condition Good



- Acc. No. 068
1. Object Coin
2. Material Copper
3. Date / Period 1835 CE
4. Location Northwest side
5. Measurement Diameter: 2.5 cm
6. Description Obverse - Coat of arms of East India Company arms, a shield quartered with escutcheon of France and England in the first quarter; crest of a lion rampant guardant holding between his forepaws the imperial crown proper; with supporters two lions rampant guardant each supporting a banner charged with a cross and written 1835 date of the issue of this coin.
Reverse - Not clear.

7. Condition Good



- 8
- Acc. No. 069
1. Object Sling ball
 2. Material Terracotta
 3. Date / Period Late Medieval
 4. Location Northwest side
 5. Measurement Diameter: 2.5 cm
 6. Description Small terracotta sling ball red in colour.
 7. Condition Good

40427
409



- Acc. No. 070
1. Object Shiva *linga*
 2. Material Marble
 3. Date / Period Late Medieval
 4. Location Northwest side
 5. Measurement Height: 5 cm
 6. Description This is a broken part of Shiva *linga*. It is cylindrical in shape. Only the base of the Shiva *linga* is missing.
 7. Condition Good

40427
H10



- Acc. No. 071
1. Object Pendant
2. Material Glass
3. Date / Period Modern
4. Location Northwest side
5. Measurement Length: 2 cm
Width: 2 cm
6. Description Geometric shape pendant. It has two holes in two ends. It was probably used as an ornament.
7. Condition Good

4042
411



- Acc. No. 073
1. Object Ornament
 2. Material Aluminium
 3. Date / Period Modern
 4. Location Northwest side
 5. Measurement Diameter: 2.5 cm
 6. Description A broken part of a ear-ring. It has golden colour polish.
 7. Condition Good

4.0427
412



- Acc. No. 074
1. Object Tool
2. Material Iron
3. Date / Period Late Medieval
4. Location Northwest side
5. Measurement Length: 9.5 cm
6. Description A broken unidentified iron tool. Both the end part have been flattened to produced flat working surface.
7. Condition Good

40422
413



- Acc. No. 075
1. Object Shiva *linga*
2. Material Sandstone
3. Date / Period Medieval
4. Location Western side of the Cellar S2
5. Measurement Length: 3 cm
6. Description The Shiva *linga* is cylindrical in shape with convex top. It is broken at the bottom.
7. Condition Good

40432
414



- Acc. No. 076
1. Object Sculpture of Ganesha
2. Material Terracotta
3. Date / Period Late Medieval
4. Location Western side of the Cellar S2
5. Measurement Height: 8.5 cm
Width: 3.5 cm
Thickness: 2 cm
6. Description Four handed terracotta figure of Ganesh. The deity is seated in *padmasana* posture and upper two hands are damaged. The trunk turned towards the right of the image. The two lower hands are placed on the knee of the folded legs. The deity is seated on an oval pedestal.
7. Condition Good



- Acc. No. 077
1. Object Yonipatta
 2. Material Soft stone
 3. Date / Period Late Medieval
 4. Location Western side of the Cellar S2
 5. Measurement Height: 3 cm
Diameter: 3 cm
 6. Description A decorated *damru* shape *yonipatta*. The upper part of this *yonipatta* is decorated with snake design. There is a round depression in the centre for *linga*. In front of the *yonipatta* a devotee is depicted in *anjali* mudra. The figure is mutilated.
 7. Condition Good

40437
416



- Acc. No. 078
1. Object Natural stone
 2. Material Semiprecious stone
 3. Date / Period -
 4. Location Western Chamber
 5. Measurement Height: 3 cm
Width: 6 cm
 6. Description A natural stone.
 7. Condition Good

40437
417



- Acc. No. 079
1. Object Sculpture of Bala Krishna
2. Material Sandstone
3. Date / Period Late Medieval
4. Location Northwest side
5. Measurement Height: 9 cm
Width: 4 cm
Thickness: 5 cm
6. Description Extant portion depicts a nude headless torso of a deity. The right leg is slightly in front. Both the legs are broken at the thigh portion. Based on the iconographic features, it appears to be the figure of Bala Krishna.
7. Condition Good

40427
410

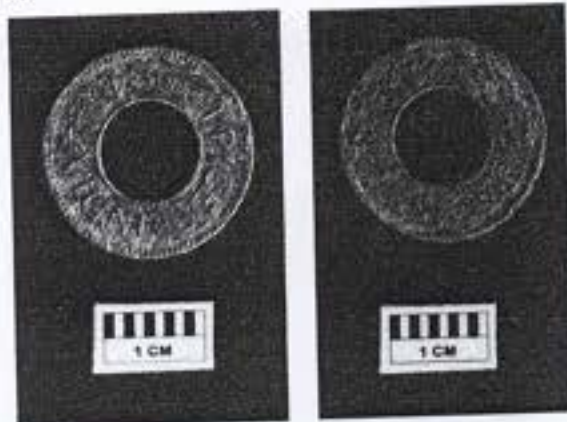


- 30
- Acc. No. 080
1. Object Sculpture of Hanuman
2. Material Terracotta
3. Date / Period Late Medieval
4. Location Western Chamber
5. Measurement Height: 7.5 cm
Width: 3 cm
Thickness: 2 cm
6. Description The extant portion depicts the upper half of the body of Hanuman. Right hand holds the *gada*, left hand is broken. The figure is broken from the waist part. The deity is adorned with a high crown.
7. Condition Good
- 40432
419



- Acc. No. 081
1. Object Coin
2. Material Copper
3. Date / Period 1943 CE
4. Location Northwest side
5. Measurement Diameter: 2 cm
6. Description Circular copper coin of British India. This coin has a hole in centre. In the obvers of the coin written 1 Pice and year 1943. The reverse side contain the floral decoration.
7. Condition Good

40537
420



- 40421
421
- Acc. No. 082
1. Object *Yonipatta*
 2. Material Sandstone
 3. Date / Period Late Medieval
 4. Location Eastern side of the Cellar S2
 5. Measurement Height: 2 cm
Width: 2 cm
Thickness: 5 cm
 6. Description The extant part is the tapering part of the *Yonipatta*. The lower part of this fragment has also some decoration.
 7. Condition Good



- Acc. No. 083
1. Object Pestle (2)
2. Material Sandstone
3. Date / Period Late Medieval
4. Location Eastern side of the Cellar S2
5. Measurement 1 - Height: 10 cm, Width: 4 cm, Thickness: 3 cm
2 - Height: 4 cm, Width: 3 cm, Thickness: 1.5 cm
6. Description Two broken pestles. The first one a larger than the second one and it is broken in one side. The second one is broken and only one working edge is remaining.
7. Condition Good

40421
422



- Acc. No. 084
1. Object Bowl
2. Material Sandstone
3. Date / Period Late Medieval
4. Location Eastern side of the Cellar S2
5. Measurement Height: 5 cm

Diameter: 11 cm

6. Description A broken portion of a bowl made of stone. The inside of the bowl is rough and has chisel marks, whereas the outer surface is finished and smooth.

7. Condition Good

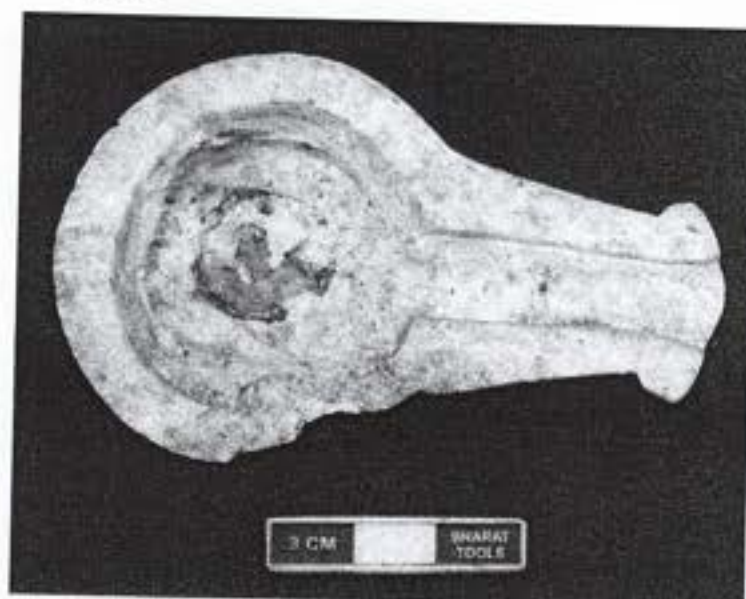


- 40427
424
- | | |
|------------------|--|
| Acc. No. | 086 |
| 1. Object | Bowl |
| 2. Material | Sandstone |
| 3. Date / Period | Late Medieval |
| 4. Location | Eastern side of the Cellar S2 |
| 5. Measurement | Height: 4 cm
Thickness: 2.5 cm |
| 6. Description | A broken portion of a bowl made of stone. The inside of the bowl is rough and has chisel marks, where as the outer surface is finished and smooth. |
| 7. Condition | Good |



- Acc. No. 087
1. Object *Yonipatta*
2. Material Marble
3. Date / Period Late Medieval
4. Location Eastern side of the Cellar S2
5. Measurement Length: 8 cm
Thickness: 1.5 cm
6. Description A broken portion of a *yonipatta*. The circular part has two round grooves. The one in the centre is for the *linga*. The outer groove continues on either side of the tapering portion.
7. Condition Good

610438
425



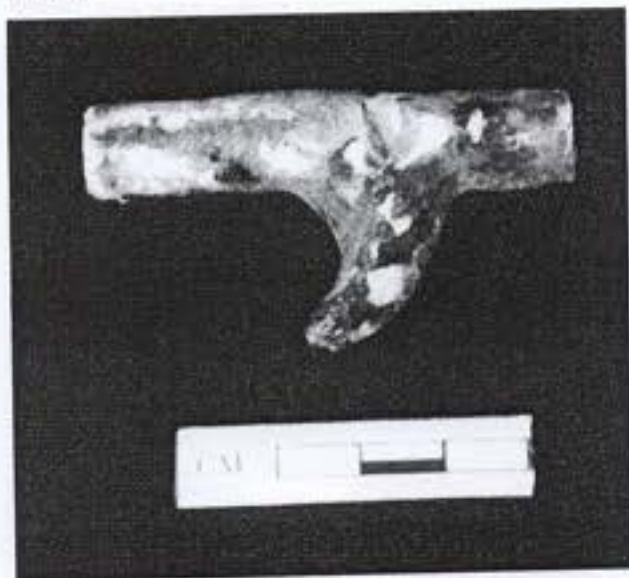
- 40427
426
- | | |
|------------------|---|
| Acc. No. | 088 |
| 1. Object | Female figurine |
| 2. Material | Sandstone |
| 3. Date / Period | Early Medieval |
| 4. Location | Northwest side |
| 5. Measurement | Height: 20.5 cm
Width: 6.5 cm
Thickness: 8 cm |
| 6. Description | The extent part depicts a female in standing posture. The right hand is raised with palm facing front, left hand hangs down and kept on left thigh. |
| 7. Condition | Good |



- 40425
427
- Acc. No. 090
1. Object Human figurine
 2. Material Terracotta
 3. Date / Period Late Medieval
 4. Location Northwest side
 5. Measurement Height: 4 cm
Width: 4.5 cm
 6. Description Extant portion depicts a headless male torso. Both the arms are broken below the shoulder.
 7. Condition Good



- 40432
428
- | | |
|------------------|--|
| Acc. No. | 091 |
| 1. Object | Ankush |
| 2. Material | Glazed object |
| 3. Date / Period | Late Medieval |
| 4. Location | Northwest side |
| 5. Measurement | Length: 5.8 cm
Width: 3 cm
Diameter: 1 cm |
| 6. Description | A black coloured broken part of <i>ankush</i> shaped object. |
| 7. Condition | Good |



- Acc. No. 092
1. Object Horse shoe
 2. Material Iron
 3. Date / Period Late Medieval
 4. Location Northwest side
 5. Measurement Length: 6 cm
Width: 6 cm
Thickness: 3 cm
 6. Description The horse shoe has central groove running on one side. Back side is plain.
 7. Condition Good

UC452K
429



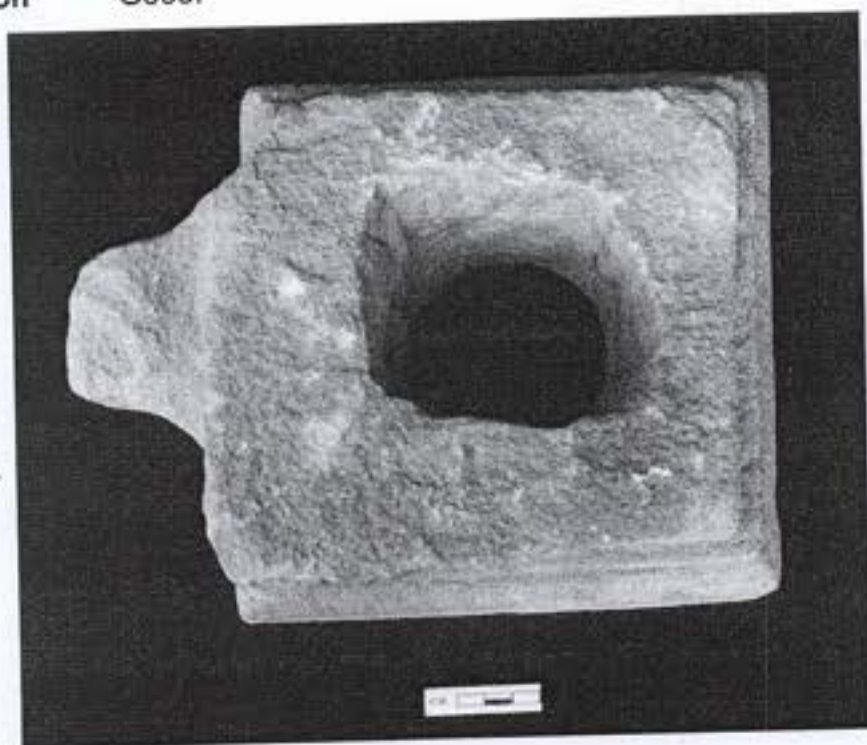
- 40437
430
- Acc. No. 093
1. Object Sickle shaped object
 2. Material Iron
 3. Date / Period Late Medieval
 4. Location Northwest side
 5. Measurement Length: 6 cm
Width: 5.5 cm
Thickness: 2 cm
 6. Description The sickle shaped iron object. One arm is broken. Other end has pointed, probably for fixing.
 7. Condition Good



- Acc. No. 095
1. Object Broken torso
2. Material Terracotta
3. Date / Period Late Medieval
4. Location Western Chamber
5. Measurement Length: 4 cm
Width: 3.5 cm
Thickness: 1.5 cm
6. Description Headless male torso broken below the waist. The bust is covered in a tunic-like dress with belt and scarf across the chest.
7. Condition Good



- 40427
432
- Acc. No. 096
1. Object *Yonipatta*
 2. Material Sandstone
 3. Date / Period Medieval
 4. Location Western Chamber
 5. Measurement Height: 23.5 cm
Width: 9 cm
Thickness: 18.5 cm
 6. Description Square shape *yonipatta* having hole in the centre. Deep grooves along with outer line. It was found lying up side down just in front of entrance of main *mandapa*.
 7. Condition Good.



- 4042P
433
- | | |
|------------------|---|
| Acc. No. | 097 |
| 1. Object | Pestle |
| 2. Material | Sandstone |
| 3. Date / Period | Late Medieval |
| 4. Location | Cellar S2 |
| 5. Measurement | Length: 7 cm
Diameter: 5.5 cm |
| 6. Description | A broken pestle. Cross section is plano-convex. Working edge is smooth indicate it was in used. |
| 7. Condition | Good |



- 43438
434
- Acc. No. 098
1. Object Horse shoe
2. Material Iron
3. Date / Period Late Medieval
4. Location Cellar S2
5. Measurement Length: 8 cm
Width: 5 cm
Thickness: 1 mm
6. Description Half broken horse shoe. Half part is extant. The extant part contains three rectangular hole for fixing. The extant end is flat.
7. Condition Good



- Acc. No. 099
1. Object Lid
2. Material Copper
3. Date / Period Late Medieval
4. Location Cellar S2
5. Measurement Diameter: 3.5 cm
6. Description A broken miniature lid. It has saggar base. It is made of copper sheet.
7. Condition Good

40427
435

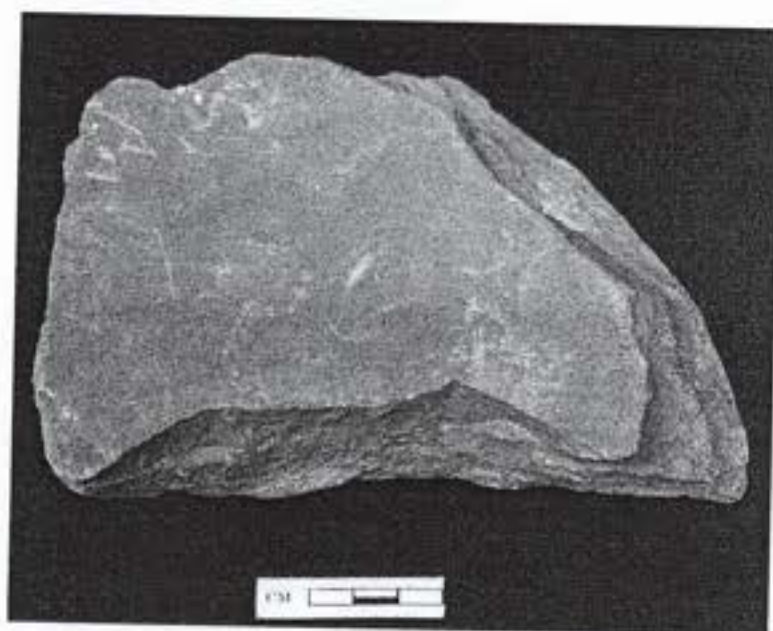


- 40438
436
- | | |
|------------------|---|
| Acc. No. | 103 |
| 1. Object | Tile |
| 2. Material | Terracotta |
| 3. Date / Period | Late Medieval |
| 4. Location | Cellar S2 |
| 5. Measurement | Length: 10 cm
Width: 5.5 cm
Thickness: 2.5 cm |
| 6. Description | Wedge shaped terracotta tile. It is rectangular across section. It is dull red in colour. |
| 7. Condition | Good |

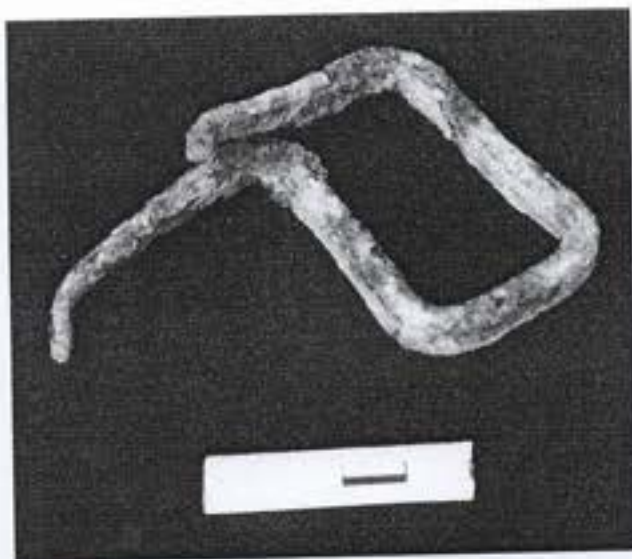


- Acc. No. 109
1. Object Bread-board (*Chakla*)
2. Material Sandstone
3. Date / Period Late Medieval
4. Location Cellar S2
5. Measurement Length: 10 cm
Width: 5.5 cm
Thickness: 2.5 cm
6. Description Circular bread-board (*chakla*) which is broken from the centre. The extant part has one triangular foot.
7. Condition Good

60428
437



- 40422
438
- | | |
|------------------|---|
| Acc. No. | 110 |
| 1. Object | Clamp |
| 2. Material | Iron |
| 3. Date / Period | Late Medieval |
| 4. Location | Western Chamber |
| 5. Measurement | Thickness: 1 cm |
| 6. Description | The iron clamp having square cross section. After recovery some chemical treatment is already done for removal of the rust. |
| 7. Condition | Good |



- 4045R
4349
- | | |
|------------------|---|
| Acc. No. | 111 |
| 1. Object | Vyala |
| 2. Material | Sandstone |
| 3. Date / Period | Early Historical |
| 4. Location | In the right side of the Cellar S2 |
| 5. Measurement | Height: 23 cm
Thickness: 8 cm |
| 6. Description | Square stone is having circular medallion with mythical animal depicted within. The animal has face of lion with horns. The lower part is like fish tail with depiction of scale. Its one paw-like forelimbs is noticeable. |
| 7. Condition | Good |

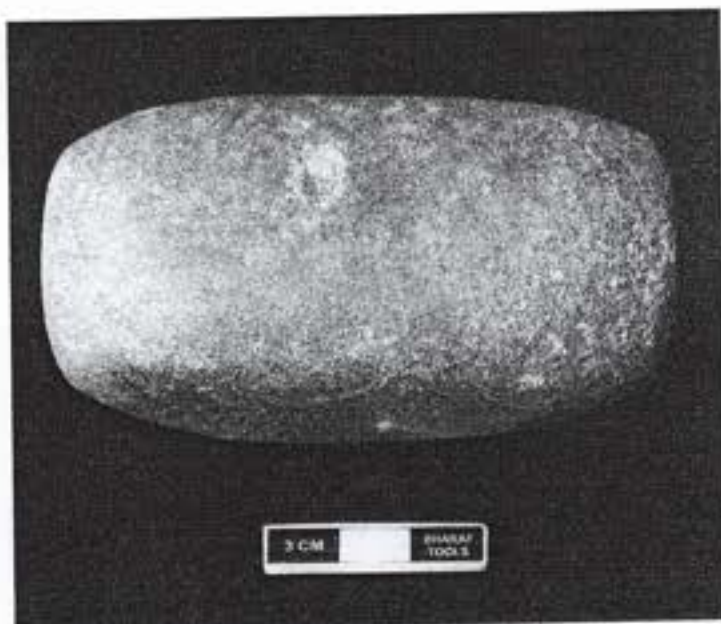


- 40437
440
- | | |
|------------------|---|
| Acc. No. | 112 |
| 1. Object | <i>Yonipatta</i> |
| 2. Material | Sandstone |
| 3. Date / Period | Medieval |
| 4. Location | Cellar S2 |
| 5. Measurement | Height: 21 cm
Width: 6 cm
Diameter: 14 cm |
| 6. Description | The circular part of the <i>yonipatta</i> has a round socket for the <i>linga</i> .
A snake figure is depicted on the tapering side. |
| 7. Condition | Good |



- Acc. No. 113
1. Object Pestle
2. Material Sandstone
3. Date / Period Late Medieval
4. Location Cellar N4
5. Measurement Length: 9 cm
Width: 5 cm
6. Description Complete specimen. Square cross section. All the four face have smooth surface.
7. Condition Good

40427
441



- 4042
442
- Acc. No. 114
1. Object Spatula
 2. Material Copper
 3. Date / Period Late Medieval
 4. Location Cellar N4
 5. Measurement Length: 32 cm
Width: 7.5 cm
Thickness: 5 mm
Weight: 159 gram
 6. Description Circular working end and long handle having square cross section. Handle has engraved decoration in both the part.
 7. Condition Good



- Acc. No. 115
1. Object Weight (?)
2. Material Sandstone
3. Date / Period Modern
4. Location Cellar S2
5. Measurement Thickness: 3.5 cm
Diameter: 7.5 cm
6. Description Circular specimen with well rounded edges. It is white in colour.
7. Condition Good

C10422
443



- 40427
444
- Acc. No. 116
1. Object Sculptural fragment
2. Material Schist stone
3. Date / Period Medieval
4. Location Cellar N4
5. Measurement Height: 14 cm
Width: 18.5 cm
6. Description The extant piece depicts a defaced human bust. The broken right hand is raised at shoulder level. Elongated ears are noticeable. Neck is adorned with a necklace.
7. Condition Good

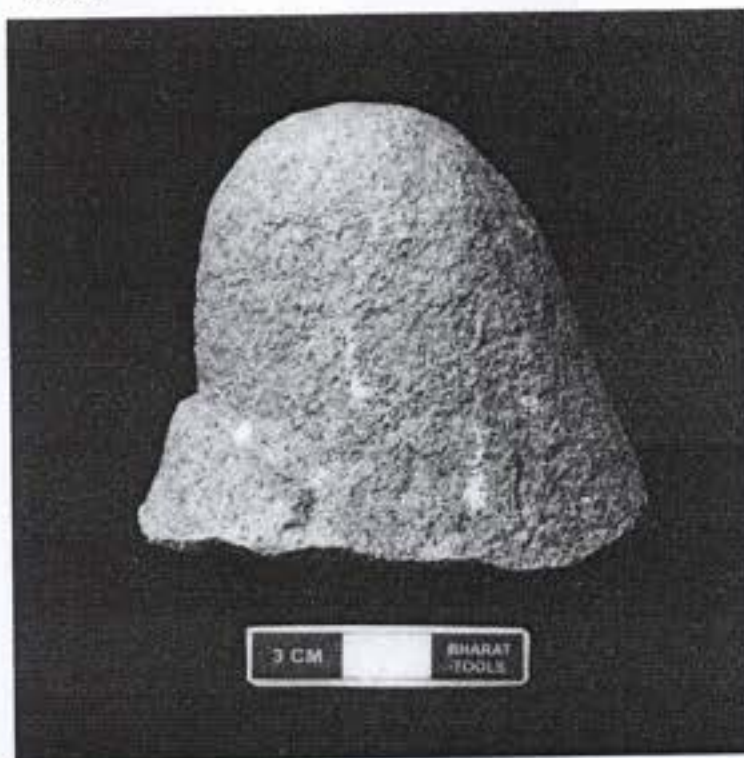


- Acc. No. 122
1. Object Pestle
2. Material Sandstone
3. Date / Period Late Medieval
4. Location Cellar S2
5. Measurement Length: 9.5 cm
Width: 6.5 cm
Diameter: 4 cm
6. Description Cylindrical pestle broken length-wise. Circular cross section. Either end of the pestle are also circular in shape.
7. Condition Good



- Acc. No. 123
1. Object Sculptural fragment
 2. Material Sandstone
 3. Date / Period Medieval
 4. Location Cellar S2
 5. Measurement Length: 7 cm
Thickness: 5.5 cm
 6. Description Folded knee portion of a seated sculpture. It is made of sandstone with rough texture.
 7. Condition Good

40427
448



- Acc. No. 124
1. Object Sculptural fragment
2. Material Sandstone
3. Date / Period Medieval
4. Location Cellar S2
5. Measurement Length: 7 cm
Thickness: 5 cm
6. Description Fist of the right hand of a sculpture. It is highly abraded specimen.
7. Condition Good

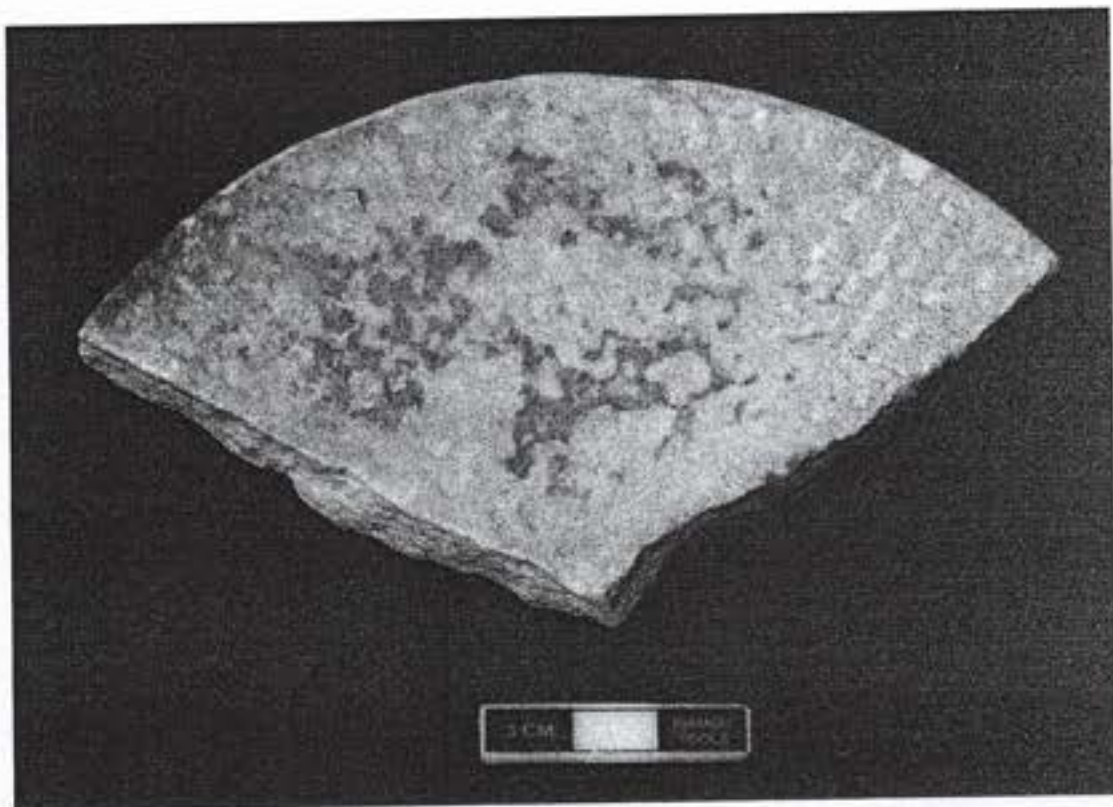
110427
447



- 40427
440
- | | |
|------------------|--|
| Acc. No. | 125 |
| 1. Object | Miniature mortar |
| 2. Material | Soft stone |
| 3. Date / Period | Medieval |
| 4. Location | Cellar S2 |
| 5. Measurement | Length: 7.5 cm
Width: 5 cm
Thickness: 2 cm |
| 6. Description | Boat shaped shallow mortar. Base part is flat. Probably used for medicine preparation purpose. |
| 7. Condition | Good |



- 610427
449
- Acc. No. 126
1. Object Bread-board (*Chakla*)
 2. Material Sandstone
 3. Date / Period Late Medieval
 4. Location Cellar S2
 5. Measurement Length: 11.5 cm
Thickness: 3 cm
 6. Description Circular bread-board (*chakla*) which is broken from the centre. The extant part has one triangular foot.
 7. Condition Good



- Acc. No. 127
1. Object Clamp
2. Material Iron
3. Date / Period Medieval
4. Location Cellar N4
5. Measurement Length: 9.5 cm
Width: 2 cm
Thickness: 1 cm
6. Description Broken iron clamp. One end is missing. Rectangular cross section.
7. Condition Good

404m
450



- Acc. No. 128
1. Object Clamp
2. Material Iron
3. Date / Period Medieval
4. Location Cellar N4
5. Measurement Length: 14 cm
Width: 3 cm
Thickness: 0.5 cm
6. Description One arm is broken and it looks like L shape. Rectangular cross section.
7. Condition Rusted.

40608
451



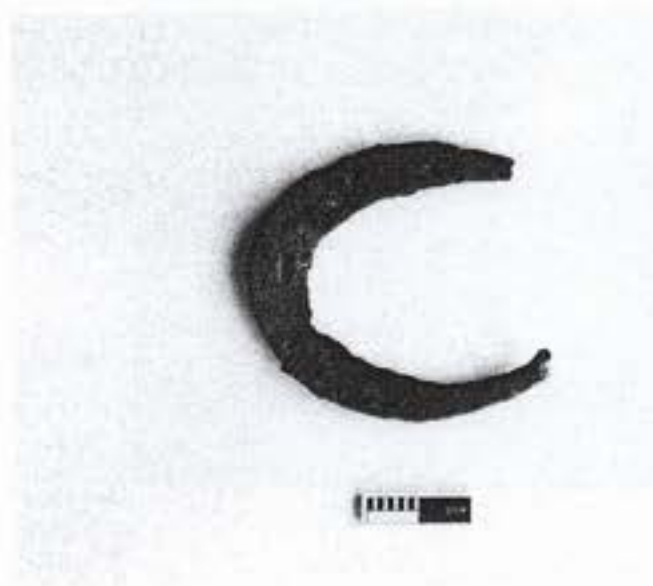
- Acc. No. 129
1. Object Latch
2. Material Iron
3. Date / Period Medieval
4. Location Cellar N4
5. Measurement Length: 12 cm
Thickness: 0.7 cm
Width: 2 cm
6. Description Latch with a pointed end. Rectangular cross section. One end is broken.
7. Condition Rusty.

40 407
452



- Acc. No. 130
1. Object Horse shoe
2. Material Iron
3. Date / Period Modern
4. Location Northwest side
5. Measurement Length: 6 cm
Width: 1.3 cm
Thickness: 3 cm
6. Description Horse shoe having one hole. Both the end pointed and one end is broken.
7. Condition Rusted.

40437
US3



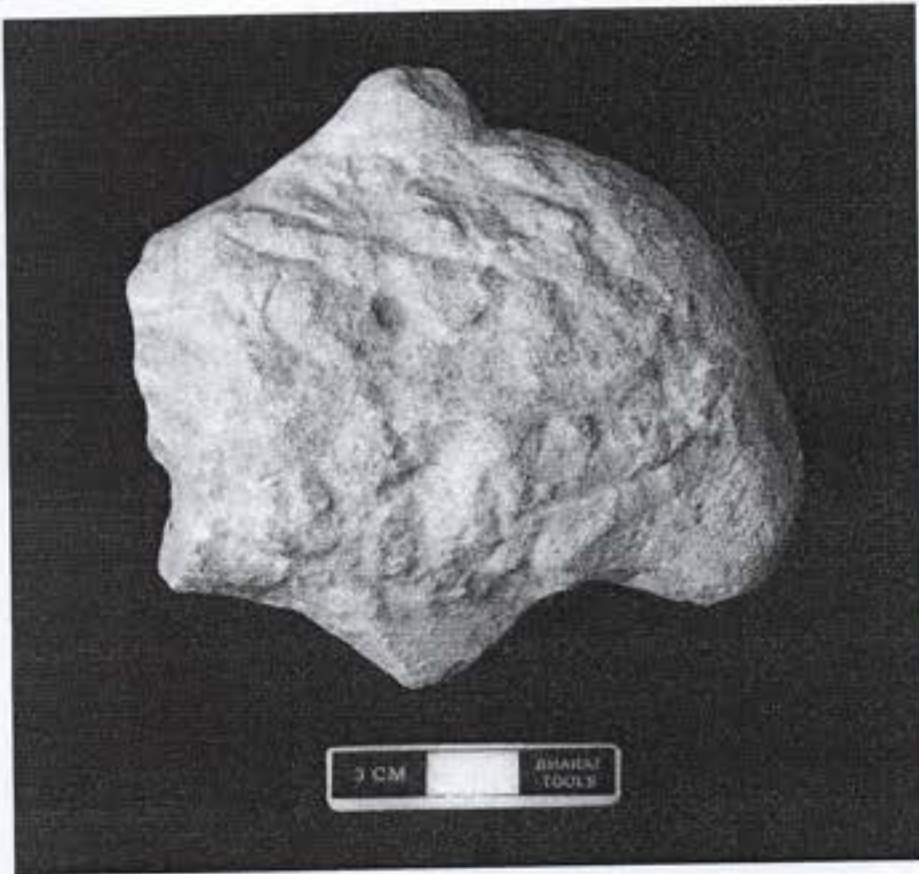
- Acc. No. 131
1. Object Decorated fish
2. Material Alloy
3. Date / Period Modern
4. Location Northwest side
5. Measurement Length: 3.6 cm
Width: 2 cm
6. Description Decorated piece depicting fish. It has beaded border. The back side has a broken knob.
7. Condition Good



- 40437
555
- | | |
|------------------|--|
| Acc. No. | 156 |
| 1. Object | Sculptural fragment |
| 2. Material | Marble |
| 3. Date / Period | Medieval |
| 4. Location | Cellar N4 |
| 5. Measurement | Length: 8.5 cm
Width: 2.5 cm |
| 6. Description | The extant part is the left hand broken above the elbow. It is bent at the elbow, the palm is fisted like holding an object. |
| 7. Condition | Good |



- 40437
456
- | | |
|------------------|--|
| Acc. No. | 157 |
| 1. Object | Sculptural fragment |
| 2. Material | Sandstone |
| 3. Date / Period | Medieval |
| 4. Location | Cellar N4 |
| 5. Measurement | Length: 7 cm
Width: 7 cm
Thickness: 4 cm |
| 6. Description | Damaged specimen of a portion of a sculpture. |
| 7. Condition | Good |



- 140438
454
- | | |
|------------------|---|
| Acc. No. | 160 |
| 1. Object | Human figurine |
| 2. Material | Terracotta |
| 3. Date / Period | Modern |
| 4. Location | Cellar N4 |
| 5. Measurement | Length: 4.5 cm
Width: 4 cm
Thickness: 3.2 cm |
| 6. Description | The extant part depicts a seated human figure on circular pedestal which looks like inverted lotus. The specimen is painted with white and red colour. The upper portion of the image is missing. |
| 7. Condition | Good |



- 40427
458
- Acc. No. 161
1. Object Gada
 2. Material Marble
 3. Date / Period Modern
 4. Location Cellar N4
 5. Measurement Length: 2.3 cm
Thickness: 1.8 cm
 6. Description The extant part depicts only the mace head. Finial at the top is partially broken. The globular part is broken and has concentric rings.
 7. Condition Good



- Acc. No. 162
1. Object Fragmentary human figurine
2. Material Terracotta
3. Date / Period Medieval
4. Location Cellar N4
5. Measurement Height: 6 cm
Width: 3.8 cm
Thickness: 1.5 cm
6. Description The extant part depicts the right hand holding a ring-like object.
7. Condition Good

40437
459



- Acc. No. 163
1. Object Yonipatta
2. Material Sandstone
3. Date / Period Medieval
4. Location Southwest side
5. Measurement Length: 34 cm
Width: 18 cm
Thickness: 7 cm
6. Description The top circular part is broken. The undressed circular groove for the *linga* is partially extant. The tapering sides are present.
7. Condition Good

40337
460

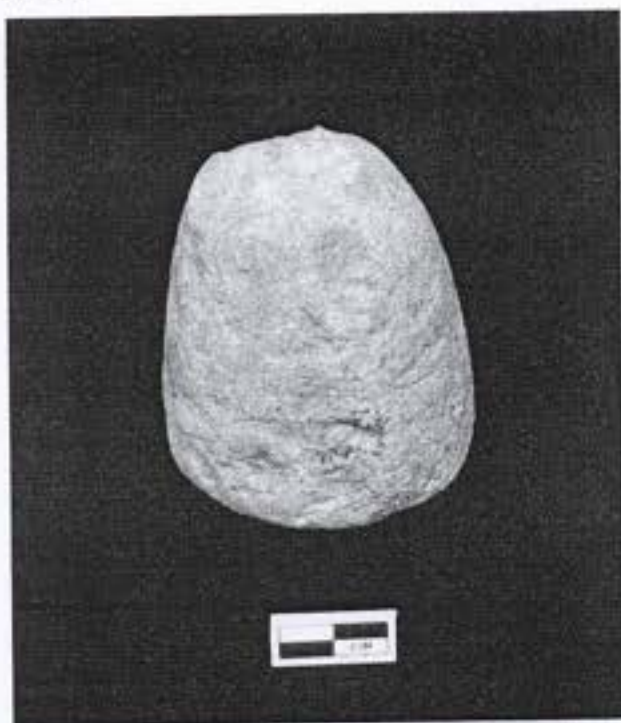


- Acc. No. 164
1. Object Human figurine
2. Material Terracotta
3. Date / Period Modern
4. Location Northwest side
5. Measurement Height: 5.5 cm
Width: 5 cm
Thickness: 2.5 cm
6. Description The extant part depicts a standing couple. The figure on the right is of a male and that on the left is a female. They are both depicted standing on a pedestal.
7. Condition Good



- Acc. No. 165
1. Object Pestle
2. Material Sandstone
3. Date / Period Late Medieval
4. Location Cellar N4
5. Measurement Length: 7 cm
Diameter: 6.3 cm
6. Description Conical stone object. The conical end is broken. A shallow depression notice in the centre of the base.
7. Condition Good

404/11
462



- Acc. No. 166
1. Object Pestle
2. Material Sandstone
3. Date / Period Late Medieval
4. Location Cellar N4
5. Measurement Length: 7.9 cm
Width: 5.5 cm
6. Description Cylindrical pestle with flat working end. The working surface has a small depression all through. Cross section is plano-convex.
7. Condition Good

40438
463



- 40432
464
- | | |
|------------------|---|
| Acc. No. | 167 |
| 1. Object | Pestle |
| 2. Material | Sandstone |
| 3. Date / Period | Late Medieval |
| 4. Location | Cellar N4 |
| 5. Measurement | Length: 7 cm
Width: 5 cm |
| 6. Description | Cylindrical pestle broken at either end. The extant surface all around the pestle is smooth. Cross section is plano-convex. |
| 7. Condition | Good |



- 40457
465
- Acc. No. 169
1. Object Pestle
2. Material Sandstone
3. Date / Period Late Medieval
4. Location Northwest side
5. Measurement Length: 9 cm
Width: 5.5 cm
Thickness: 3.5 cm
6. Description Complete specimen of pestle. It is rectangular in cross section with rounded edges. The surface is rough.
7. Condition Good



- 40437
468
- Acc. No. 170
1. Object Sculptural fragment
 2. Material Marble
 3. Date / Period Late Medieval
 4. Location Western Chamber
 5. Measurement Length: 7 cm
Width: 3.5 cm
 6. Description Extant part of the sculpture depicts the folded knee in seated posture.
 7. Condition Good



- 40427
467
- Acc. No. 182
1. Object Human figurine
2. Material Terracotta
3. Date / Period Late Medieval
4. Location Western Chamber
5. Measurement Length: 2 cm
Width: 3 cm
6. Description Extant part is the human face. The features have weathered off. It is hollow from back.
7. Condition Good



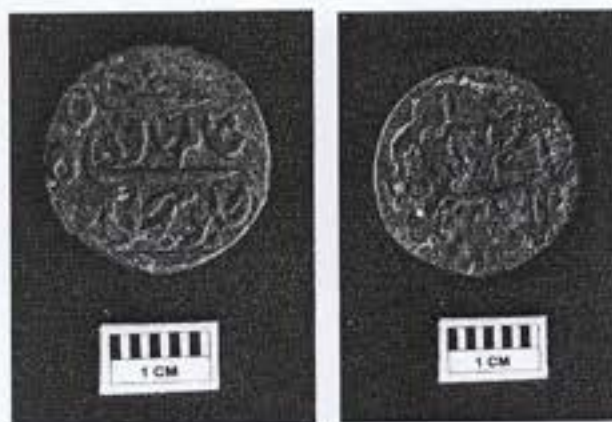
- 403m
468
- | | |
|------------------|--|
| Acc. No. | 183 |
| 1. Object | Human figurine |
| 2. Material | Terracotta |
| 3. Date / Period | Late Medieval |
| 4. Location | Western Chamber |
| 5. Measurement | Length: 4.8 cm
Width: 4.5 cm
Diameter: 3.8 cm |
| 6. Description | The extant part is the human face. Facial features are well delineated. Hair frames the forehead and depicted in fine lines. |
| 7. Condition | Good |



- 40427
469
- Acc. No. 184
1. Object Coin
2. Material Copper
3. Date / Period Late Medieval
4. Location Western Chamber
5. Measurement Diameter: 2.3 cm
6. Description Coin having Persian legend on both the sides.
Obverse - Shah Alam Badshah sana 37 Julus
Translation - King Shah Alam II issued this coin in regnal year 37
corresponding to 1794 CE.
Reverse - Verse not clear.
7. Condition Good



- 40427
470
- | | |
|------------------|---|
| Acc. No. | 185 |
| 1. Object | Coin |
| 2. Material | Copper |
| 3. Date / Period | Late Medieval |
| 4. Location | Western Chamber |
| 5. Measurement | Diameter: 2.2 cm |
| 6. Description | <p>Coin having Persian legend of both the sides.</p> <p>Obverse - Shah Alam Badshah sana 45 Julus</p> <p>Translation - King Shah Alam II issued this coin in regnal year 45 corresponding to 1802 CE.</p> <p>Reverse - 'Sikka ek Pie' in Arabic and in Devnagari script 'ek Pie Sikka'.</p> |
| 7. Condition | Good |



- 40437
471
- Acc. No. 186
1. Object Coin
2. Material Copper
3. Date / Period 1862 CE
4. Location Western Chamber
5. Measurement Diameter: 2.4 cm
6. Description Obverse - Crown head of Queen Victoria facing left, with script Victoria Queen.
Reverse - One Quarter Anna with foliated wreath.
7. Condition Good



- 40472
472
- | | |
|------------------|--|
| Acc. No. | 187 |
| 1. Object | Sculptural fragment |
| 2. Material | Sandstone |
| 3. Date / Period | Medieval |
| 4. Location | Western Chamber |
| 5. Measurement | Length: 15.5 cm
Width: 13 cm
Height: 7.5 cm |
| 6. Description | The extant part depicts a female figure with hands folded in <i>anjali mudra</i> in front. The figure is adorned with ear ornament, necklace and bangles. Head is mutilated. |
| 7. Condition | Good |



- 40427
473
- | | |
|-------------------------|--|
| Acc. No. | 188 |
| 1. Object | Coin |
| 2. Material | Copper |
| 3. Date / Period | 1835 CE |
| 4. Location | Western Chamber |
| 5. Measurement | Diameter: 2.4 cm |
| 6. Description | Obverse - Coat of arms of the East India Company: 2 lions
St. George's cross on the crest and flags, motto on the ribbon
"Auspicio Regis et Senatus Angliae" and 1835 is also engraved.
Reverse - One Quarter Anna between the tips of the wreath.
Around this the legend: East India Company. |
| 7. Condition | Good |



- 40437
474
- | | |
|------------------|--|
| Acc. No. | 189 |
| 1. Object | Nandi |
| 2. Material | Schist stone |
| 3. Date / Period | Medieval |
| 4. Location | Western Chamber |
| 5. Measurement | Length: 8.5 cm
Width: 4 cm
Height: 5.5 cm |
| 6. Description | Headless figure of Nandi is in seated posture. A cloth is depicted placed on the back while a band is shown passing below the tail. The right foreleg is suggestive of motion. |
| 7. Condition | Good |



- Acc. No. 190
1. Object Pestle
2. Material Sandstone
3. Date / Period Late Medieval
4. Location Western Chamber
5. Measurement Length: 6.2 cm
Width: 5.4 cm
6. Description Cylindrical shaped pestle. Working edge is broken. It has rough surface.
7. Condition Good

40437
475



- 4042r
476
- | | |
|------------------|---|
| Acc. No. | 205 |
| 1. Object | Shiva <i>linga</i> |
| 2. Material | Sandstone |
| 3. Date / Period | Medieval |
| 4. Location | Western Chamber |
| 5. Measurement | Length: 10.5 cm
Diameter: 8 cm |
| 6. Description | Shiva <i>linga</i> (broken) length wise. Bottom portion of the <i>linga</i> is damaged and <i>yonipatta</i> is missing. |
| 7. Condition | Good |



- 40437
477
- | | |
|------------------|--|
| Acc. No. | 206 |
| 1. Object | Nandi |
| 2. Material | Sandstone |
| 3. Date / Period | Late Medieval |
| 4. Location | Western Chamber |
| 5. Measurement | Length: 4.5 cm
Width: 4.2 cm
Height: 4.2 cm |
| 6. Description | The extant part depicts the forepart of the Nandi. The left foreleg is extant. Beaded garland is seen adorning the neck. |
| 7. Condition | Good. |



- 40427
478
- | | |
|------------------|--|
| Acc. No. | 207 |
| 1. Object | Shiva <i>linga</i> |
| 2. Material | Marble |
| 3. Date / Period | Late Medieval |
| 4. Location | Western Chamber |
| 5. Measurement | Length: 2.5 cm
Width: 3.5 cm
Diameter: 2 cm |
| 6. Description | Miniature Shiva <i>linga</i> with <i>Yonipatta</i> on a tiered pedestal. Lower part of the pedestal is damaged. The Shiva <i>linga</i> is also partially broken. |
| 7. Condition | Good |



- Acc. No. 208
1. Object Elephant rider
2. Material Terracotta
3. Date / Period Late Medieval
4. Location Western Chamber
5. Measurement Length: 10 cm
Height: 7 cm
Thickness: 4 cm
6. Description The hollow terracotta figurine depicts an elephant rider. The upper part of the rider and the head of the animal is lost. The rider appears to wear a long coat like garment. The left fore leg of the animal is raised. Vegetation is suggested by dots and lines.
7. Condition Good

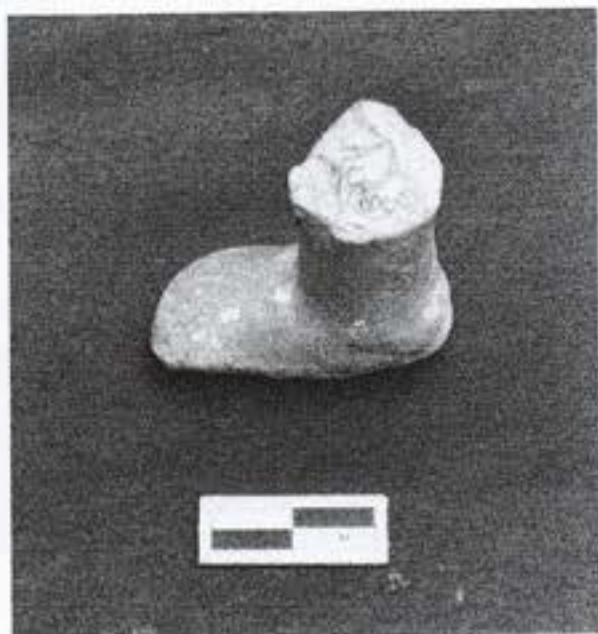
404.27
479



- 404/27
400
- Acc. No. 209
1. Object Disc
 2. Material Terracotta
 3. Date / Period Late Medieval
 4. Location Western Chamber
 5. Measurement Thickness: 1.2 cm
Diameter: 8 cm
 6. Description A circular disc. One surface is smooth and another is chipped off in different areas.
 7. Condition Good



- 40437
401
- | | |
|------------------|--|
| Acc. No. | 210 |
| 1. Object | Human figurine |
| 2. Material | Terracotta |
| 3. Date / Period | Late Medieval |
| 4. Location | Western Chamber |
| 5. Measurement | Length: 3 cm
Thickness: 3 cm
Width: 3.5 cm |
| 6. Description | Extant part is the right foot and is broken above the ankle. It is well fired and dull red in colour. Since the toe is not marked it indicate that the figure wearing a long shoe. |
| 7. Condition | Good |



- 40437
402
- | | |
|------------------|--|
| Acc. No. | 228 |
| 1. Object | Human figurine |
| 2. Material | Sandstone |
| 3. Date / Period | Medieval |
| 4. Location | Western Chamber |
| 5. Measurement | Length: 16 cm
Thickness: 7.5 cm
Width: 16 cm |
| 6. Description | The extant part depicts left folded leg of a seated human figure. The knee is pointed down. The ankle is adorned with an anklet. |
| 7. Condition | Good |



- 40422
403
- Acc. No. 232
1. Object Inscribed Slab
 2. Material Sandstone
 3. Date / Period Late Medieval
 4. Location Western Chamber
 5. Measurement Length: 27.5 cm
Thickness: 8 cm
Width: 18.5 cm
 6. Description Slab inscribed with three letters (कागज) in Devnagari script.
 7. Condition Good



- 4047
484
- Acc. No. 233
1. Object Votive shrine
 2. Material Sandstone
 3. Date / Period Early Medieval
 4. Location Cellar S2
 5. Measurement Height: 57 cm
Width: 22 cm
 6. Description The votive shrine has a tower in three tiers of receding height and topped by an *amalaka*. The tiers are decorated with *chaitya* arch motif. The square base below the tower is hollow from within. Only two sides are extant and depict a two handed standing Surya image and a four handed seated image of Ganesha. The Surya standing in *samapadasthanaka* posture and holding two full bloomed lotus in his both the hands. The image of Ganesha is seated in *ardhyaparyankasana* posture holding the usual attribute.
 7. Condition Good



- 4047
405
- Acc. No. 237
1. Object Sculpture of Ganesha
 2. Material Sandstone
 3. Date / Period Medieval
 4. Location Western Chamber
 5. Measurement Length: 12 cm
Width: 15 cm
Thickness: 8 cm
 6. Description Headless bust of the Ganesha. Only the belly portion is available in this image. It is adorned with strings of necklace and other decorative bands across the chest. The *sarpbandhana* is also visible in the belly portion of the extant image.
 7. Condition Good



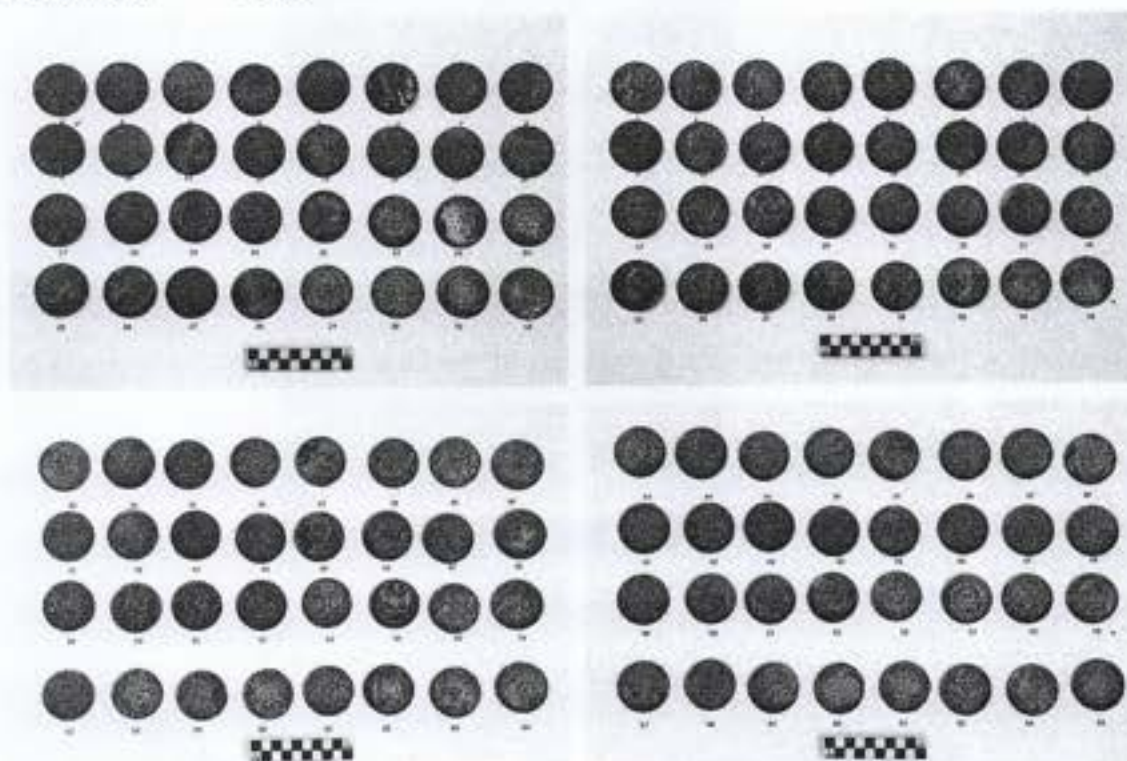
- 4049
406
- | | |
|------------------|---|
| Acc. No. | 259 |
| 1. Object | Human figurine |
| 2. Material | Terracotta |
| 3. Date / Period | Late Medieval |
| 4. Location | Western Chamber |
| 5. Measurement | Length: 10 cm
Width: 9.3 cm
Diameter: 3.5 cm |
| 6. Description | The extant part depicts the upper part of a male figure. The conical head is adorned with a high crown. Facial features are well delineated. Ears are adorned with ornament. A necklace adorns the neck. Drapery like a band is seen on both the shoulders. The right hand is bent at the elbow and broken above the wrist. The left hand is broken at the elbow. |
| 7. Condition | Good |



- 9047
90
- ✓ **Acc. No.** 260
1. **Object** Human figurine
2. **Material** Terracotta
3. **Date / Period** Late Medieval
4. **Location** Western Chamber
5. **Measurement** Length: 7.3 cm
Width: 3.5 cm
Diameter: 3 cm
6. **Description** The extant piece depicts a male figure seated on a high backed chair. The back side of the chair has criss-cross decoration. The head of the image is missing. The hand rests on the sloping shoulder of the high backed chair.
7. **Condition** Good



- 4047
400
- | | |
|------------------|--|
| Acc. No. | 261 |
| 1. Object | Coins (64) |
| 2. Material | Copper |
| 3. Date / Period | 1835-1877 CE |
| 4. Location | Cellar S2 |
| 5. Measurement | Diameter: 2.5 cm (all the coins) |
| 6. Description | <p>Coins (64 nos.) of British India. Near the third entrance gate.
 Cotton cloth Impression observed on some coins. The 64 coins
 are of 6 types on the basis of issuing authority as well as dates.
 The 6 types are coin of:</p> <p>i. East India Company, Half Anna, date 1835 (36 nos.)
 ii. Victoria Queen, Half Anna, date 1862 (13 nos.)
 iii. Victoria Queen, Half Anna, date 1874 (04 nos.)
 iv. Victoria Queen, Half Anna, date 1875 (02 nos.)
 v. Victoria Queen, Half Anna, date 1876 (01 no.)
 vi. Victoria Empress, Half Anna, date 1877 (08 nos.)</p> |
| 7. Condition | Good |



LC45T
409

- | | |
|------------------|--|
| Acc. No. | 267 |
| 1. Object | <i>Yonipatta</i> |
| 2. Material | Sandstone |
| 3. Date / Period | Late Medieval |
| 4. Location | Cellar S2 |
| 5. Measurement | Length: 11.5 cm
Width: 39 cm
Diameter: 28 cm |
| 6. Description | The stone slab containing <i>yonipatta</i> which is fixed within the socket in said slab. The socket is also <i>yonipatta</i> shaped. The <i>linga</i> is missing. |
| 7. Condition | Good |



- 40457
490
- | | |
|------------------|--|
| Acc. No. | 279 |
| 1. Object | Mortar |
| 2. Material | Sandstone |
| 3. Date / Period | Late Medieval |
| 4. Location | Cellar S2 |
| 5. Measurement | Length: 13.4 cm
Diameter: 23.5 cm |
| 6. Description | Cylindrical in shape with a slight taper and a shallow depression. It has rough texture. |
| 7. Condition | Good |



4497
491

- Acc. No. 282
1. Object Pestle
 2. Material Sandstone
 3. Date / Period Late Medieval
 4. Location Western Chamber
 5. Measurement Length: 8 cm
Diameter: 6 cm
 6. Description Cylindrical pestle broken in half. The working side has parallel horizontal grooves.
 7. Condition Good



4047T
492

- | | |
|------------------|---|
| Acc. No. | 286 |
| 1. Object | Animal Figurine |
| 2. Material | Terracotta |
| 3. Date / Period | Late Medieval |
| 4. Location | Western Chamber |
| 5. Measurement | Length: 8.4 cm
Width: 3.2 cm |
| 6. Description | The animal has a prominent snout. Only one horn is extant. All the limbs are missing. It is well fired and made of well levitated clay. Both the ear depicted by pinching method. |
| 7. Condition | Good |



- 4047
693
- Acc. No. 287
1. Object Shiva *linga*
2. Material Sandstone
3. Date / Period Late Medieval
4. Location Eastern side
5. Measurement Height: 3 cm
Diameter: 2.3 cm
6. Description Miniature Shiva *linga* with *Yonipatta* on a tiered pedestal.
Yonipatta is partially damaged and the *pranal* part is also missing.
7. Condition Good



- 4045T
494
- | | |
|------------------|---|
| Acc. No. | 288 |
| 1. Object | Coin |
| 2. Material | Nickel |
| 3. Date / Period | Modern |
| 4. Location | Western Chamber |
| 5. Measurement | Diameter: 2.7 cm |
| 6. Description | Obverse - Denomination in Arabic characters surrounded by the country name i.e. United Arab Emirates, one Dirham.
Reverse - <i>Dallah</i> (traditional Arabic coffee pot). |
| 7. Condition | Good |



- 40437
195
- Acc. No. 289
1. Object Sculptural fragment
2. Material Sandstone
3. Date / Period Medieval
4. Location Western Chamber
5. Measurement Length: 12 cm
Thickness: 4.5 cm
Width: 5 cm
6. Description The extant part depicts a defaced male figure. The right hand extends above head. The left hand folded at the elbow rests below the chest. The chest is adorned with a necklace.
7. Condition Good



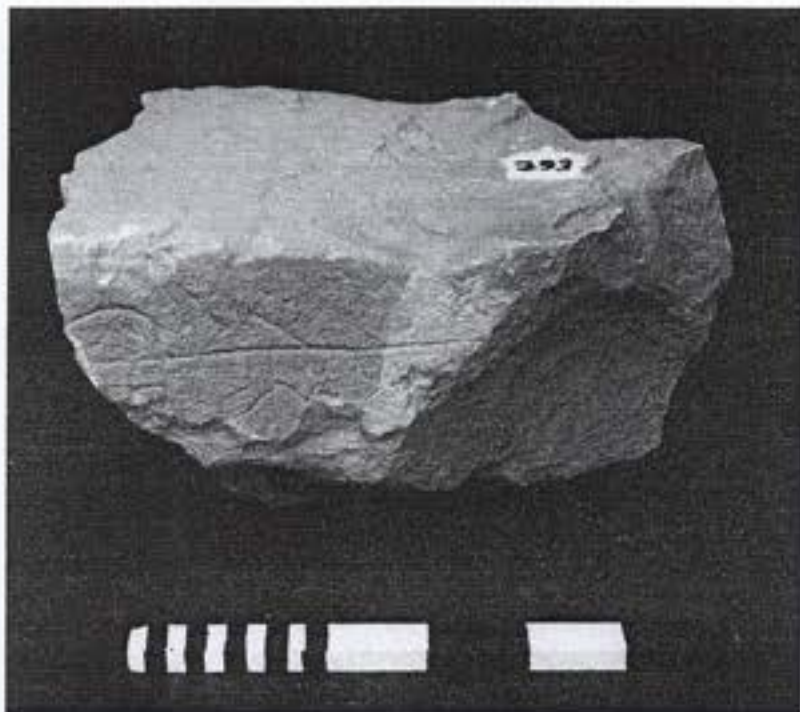
- 49497
496
- | | |
|------------------|---|
| Acc. No. | 290 |
| 1. Object | Sculptural fragment |
| 2. Material | Sandstone |
| 3. Date / Period | Medieval |
| 4. Location | Western Chamber |
| 5. Measurement | Length: 17 cm
Thickness: 7 cm
Width: 7 cm |
| 6. Description | The extant part depicts the left hand hanging down holding the conch in the palm. The wrist is adorned with a bangle. This is probably the broken hand of Vishnu. |
| 7. Condition | Good |



- 40651
497
- Acc. No. 291
1. Object Sculptural fragment
2. Material Sandstone
3. Date / Period Medieval
4. Location Western Chamber
5. Measurement Length: 16 cm
Thickness: 4 cm
6. Description The extant part depicts the arm adorned with a beaded bangle.
The palm appears to hold a long vertical object.
7. Condition Good



- 4047T
498
- | | |
|------------------|--|
| Acc. No. | 293 |
| 1. Object | Inscribed architectural member |
| 2. Material | Sandstone |
| 3. Date / Period | Late Medieval |
| 4. Location | Western Chamber |
| 5. Measurement | Length: 17 cm
Width: 37 cm
Thickness: 27 cm |
| 6. Description | Architectural member bearing three letters (निके..) in Devnagari script. |
| 7. Condition | Good |



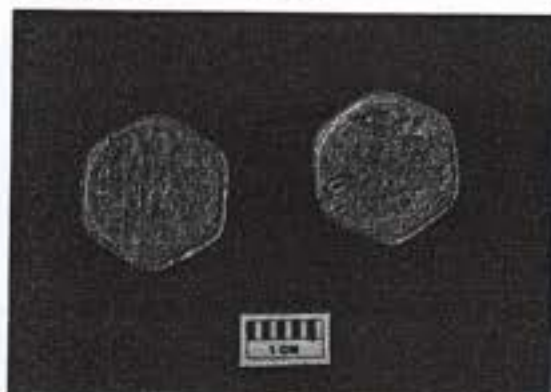
- 60437
499
- | | |
|------------------|---|
| Acc. No. | 296 |
| 1. Object | Gada |
| 2. Material | Sandstone |
| 3. Date / Period | Medieval |
| 4. Location | Western Chamber |
| 5. Measurement | Length: 9 cm
Diameter: 10.3 cm |
| 6. Description | Mace head (semi spherical). The central band has vertical grooves of rounding profile. Top and bottom are broken. |
| 7. Condition | Good |



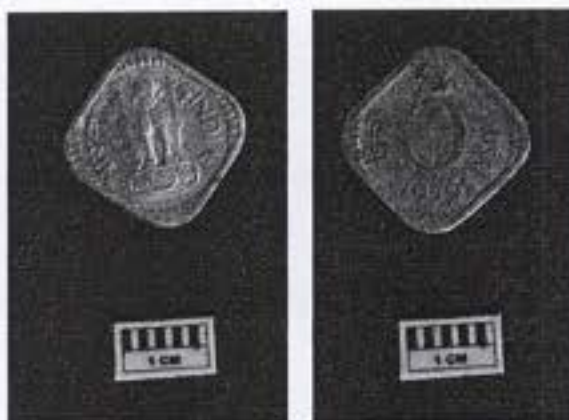
- 40477
500
- Acc. No. 297
1. Object Coins (4)
 2. Material Aluminium
 3. Date / Period Modern
 4. Location Northwest side
 5. Measurement Diameter: 2 cm (all the coins)
 6. Description Obverse - Ashokan lion capital. Bharat in Devnagari script and India in Roman script.
Reverse - 2 in numerical and Paisa written in Devnagari and Roman script, date below.
Among the four coins the issue date is 1963, 1966, 1967 and one is not readable.
 7. Condition Good



- Acc. No. 298
1. Object Coins (2)
2. Material Aluminium
3. Date / Period Modern
4. Location Northwest side
5. Measurement Diameter: 2 cm (both the coins)
6. Description Obverse - Ashokan lion capital. Bharat in Devnagari script and India in Roman script.
Reverse - 3 in numerical and Paisa written in Devnagari script flanked by sprays and date below.
Among the two coins the issue date is 1965 and 1968.
7. Condition Good



- 40677
502
- | | |
|------------------|--|
| Acc. No. | 299 |
| 1. Object | Coin |
| 2. Material | Aluminium |
| 3. Date / Period | Modern |
| 4. Location | Northwest side |
| 5. Measurement | Diameter: 2.1 cm |
| 6. Description | Obverse - Ashokan lion capital. Bharat in Devnagari script and India in Roman script.
Reverse - 5 in numerical and Paisa written in Devnagari and Roman and the date below is 1976. |
| 7. Condition | Good |



- 90451/503
- Acc. No. 300
1. Object Coin
 2. Material Aluminium
 3. Date / Period Modern
 4. Location Northwest side
 5. Measurement Diameter: 2.5 cm
 6. Description Obverse - Ashokan lion capital and numerical 10 below. Bharat and Paise written in Devnagari script and India and Paise written in Roman script.
Reverse - Bust at left looking right, wheat ear at the right. The legend is Equality Development Peace in Roman script and *Samanta Vikas Shanti* (समानता विकास शांति) in Devnagari script and date is 1975.
 7. Condition Good



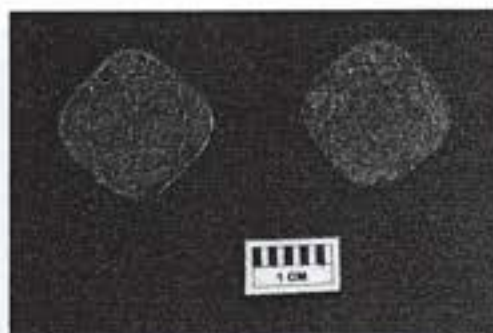
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|------------------|--|
| Acc. No. | 301 |
| 1. Object | Coins (2) |
| 2. Material | Nickel |
| 3. Date / Period | Modern |
| 4. Location | Northwest side |
| 5. Measurement | Diameter: 1.8 cm (both the coins) |
| 6. Description | Obverse - Ashokan lion capital and Bharat written in Devnagari script and India written in Roman script.
Reverse - 25 written in numerical. Paise written in Devnagari script and Roman script and dates are 1960 and 1980. |
| 7. Condition | Good |



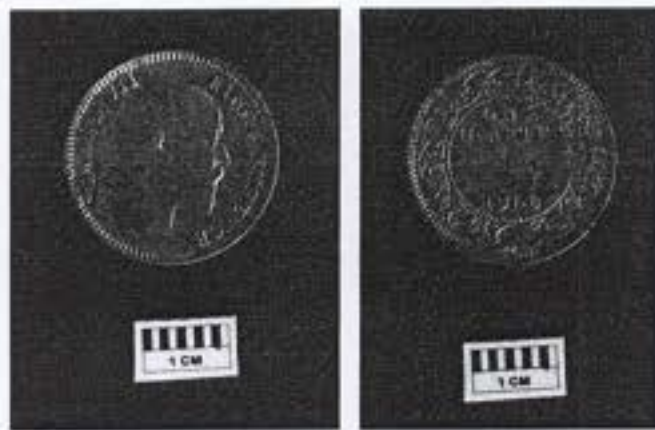
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- 3
- Acc. No. 302
1. Object Coins (2)
 2. Material Copper
 3. Date / Period 1943 CE
 4. Location Northwest side
 5. Measurement Diameter: 1.8 cm (both the coins)
 6. Description Obverse - King George VI crowned head left, English legend (George VI King Emperor).
Reverse - Half Anna and date (1943) within decorative outline, Value in 4 Indian languages outside border Urdu, Bengali, Telugu and Hindi within a toothed rim.
 7. Condition Good



40457
506

- Acc. No. 303
1. Object Coin
2. Material Copper
3. Date / Period 1906 CE
4. Location Northwest side
5. Measurement Diameter: 2.4 cm
6. Description Obverse - Bust of Edward VII facing right. The legend is Edward VII King & Emperor.
Reverse - One Quarter Anna, India and date (1906) within circle of beads, wreath surrounds.
7. Condition Good



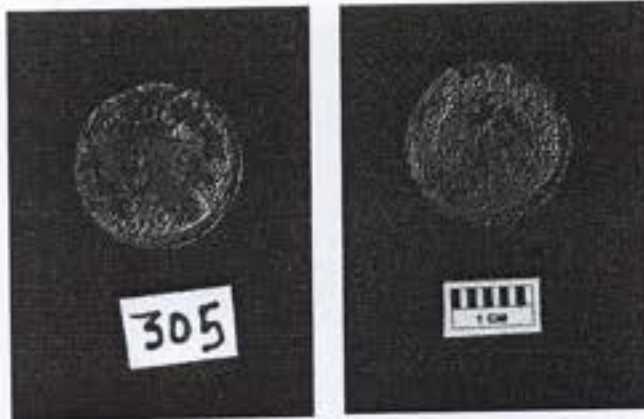
40457
507

- Acc. No.** 304
1. **Object** Coin
2. **Material** Copper
3. **Date / Period** Modern
4. **Location** Northwest side
5. **Measurement** Diameter: 1.7 cm
6. **Description** Obverse - Not clear.
Reverse - Within laurel wreath the value in English '1/12 anna' and Persian 'thalath pai'. Legend in English surrounds within a plain rim. The legend is East India Company.
7. **Condition** Good



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305

- Acc. No. 305
1. Object Coin
 2. Material Copper
 3. Date / Period Modern
 4. Location Northwest side
 5. Measurement Diameter: 2 cm
 6. Description Obverse - Not clear.
Reverse - Legend within the foliated wreath.
 7. Condition Good



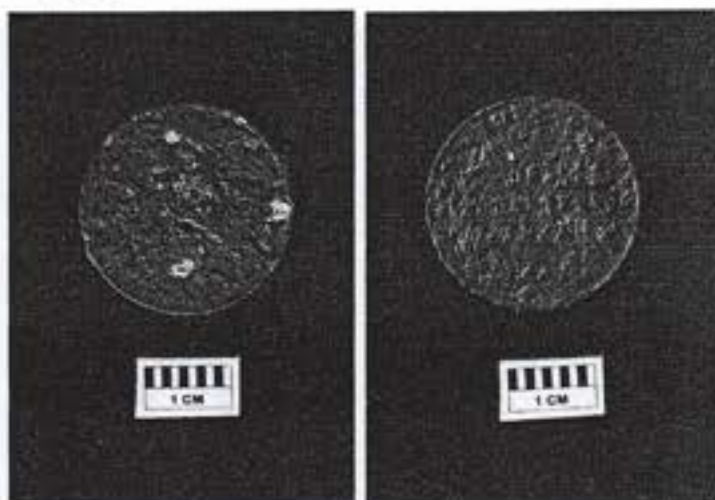
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509
- Acc. No. 306
1. Object Coin
2. Material Copper
3. Date / Period Late Medieval
4. Location Western Chamber
5. Measurement Diameter: 2.2 cm
6. Description Coin having Persian legend on both the sides.
Obverse - Shah Alam Badshah sana 45 Julus
Translation - King Shah Alam II issued this coin in regnal year 45 corresponding to 1802 CE.
Reverse - 'Sikka ek Pie' in Arabic and in Devnagari script 'ek Pie Sikka'.
7. Condition Good



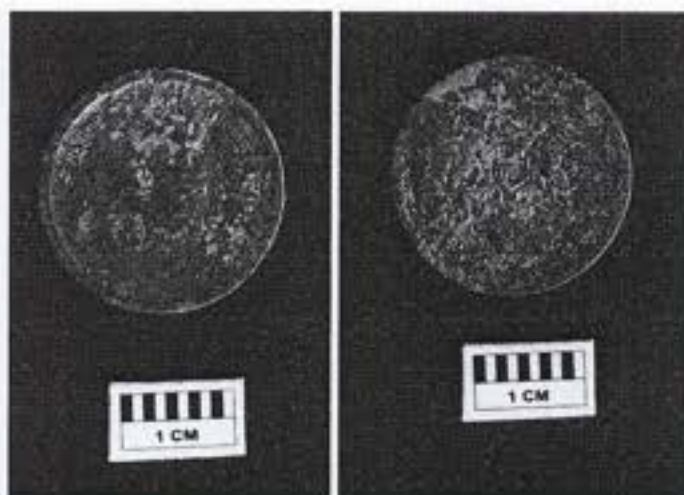
- 4045T
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|------------------|--|
| Acc. No. | 307 |
| 1. Object | Coin |
| 2. Material | Copper |
| 3. Date / Period | Modern |
| 4. Location | Western Chamber |
| 5. Measurement | Diameter: 2.4 cm |
| 6. Description | Both obverse and reverse are not clear. Only foliated wreath is partially visible in reverse side. |
| 7. Condition | Good |



- 4047T
511
- Acc. No. 308
1. Object Coin
2. Material Copper
3. Date / Period Modern
4. Location Western Chamber
5. Measurement Diameter: 2.4 cm
6. Description Obverse - Coat of arms of the East India Company: 2 lions, St George's cross on the crest and flags, motto on the ribbon "Auspicio Regis et Senatus Angliae". Date is not clear.
Reverse - One Quarter Anna written in the centre between the tips of the wreath is the value in Arabic: "Yek Pai" = One Pice. The legend is East India Company.
7. Condition Good



- 40451
512
- | | |
|------------------|---|
| Acc. No. | 309 |
| 1. Object | Coin |
| 2. Material | Copper |
| 3. Date / Period | Modern |
| 4. Location | Western Chamber |
| 5. Measurement | Diameter: 2.1 cm |
| 6. Description | Obverse - Bust of king wearing turban facing right. Legend in Devnagari ".... Shinde Alija Bahadur" is partially visible.
Reverse - State coat of arms, Devnagari legend which is not clear.
Probably this is the coin of Madho Rao, 1/4 Anna. |
| 7. Condition | Good |



- 40457
513
- | | |
|------------------|---|
| Acc. No. | 310 |
| 1. Object | Coin |
| 2. Material | Copper |
| 3. Date / Period | 1853 CE |
| 4. Location | Western Chamber |
| 5. Measurement | Diameter: 2.2 cm |
| 6. Description | Obverse - Coat of arms of the East India Company. Year 1853.
Reverse - 1/2 Pice with the legend "East India Company"
surrounding and a flat raised rim. |
| 7. Condition | Good |



- 40457
514
- | | |
|------------------|---|
| Acc. No. | 311 |
| 1. Object | Sculptural fragment |
| 2. Material | Sandstone |
| 3. Date / Period | Early Medieval |
| 4. Location | Western Chamber |
| 5. Measurement | Length: 87.5 cm
Width: 23.5 cm |
| 6. Description | The extant specimen is the part of a doorjamb of which two faces are visible. The lower part has three horizontal mouldings. Above them are depictions of two male demi-gods depicted standing on pedestals. Though much mutilated, right hand of one figure holds trident. The left hand hangs down. Among other bodily ornaments are necklace and <i>vanamala</i> . The standing male figure on the adjacent side holds a bow in his left hand. The right hand hangs down. He is embellished with crown waist band and <i>vanamala</i> . The other sides of the visible portion shows a depiction of a miniature shrine on the top, is a decorative band. |
| 7. Condition | Good |



- 9047
575
- Acc. No. 321
1. **Object** Inscribed slab
 2. **Material** Sandstone
 3. **Date / Period** Medieval
 4. **Location** Lower Room in South corridor
 5. **Measurement** Length: 106 cm
Thickness: 20 cm
 6. **Description** 6 lines (lower 2 line are mutilated/damaged)
Language / Script: Arabic and Persian / Nashkh and Nastalliq
Dates:
1. Sana Julus 20 of Alamgir (Mughal Emperor Aurangzeb) =
Regnal year 20 (A.H. 1087) = 1676-77 CE
2. A.H. 1207 = 1792-93 CE
Translation:
(1) Allahu Akbar
(2) Bismillahi – Ar- Rahman-Ar-Rahim
(3) Ashadu anna La ilah ilallah waha duhu
(4) La Sharika lahu wa Ashadu anna Muhammadan abduhu wa
rasuluhu
(5) Dar Sana 20 Julus Hadrat Alamgir een Jami masjid
tayyar Shuda dar sana 1207 Hijri al Muqadas
(6)muruthi masjid a musufa murammate sahna waghaire
numudeh.
 7. **Condition** Good



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Retrieved Objects



Retrieved Objects

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Scientific investigation/ survey work also included study of all the objects stored or lying in the complex. During removal of garbage and debris dumped in the complex and cellars a large number of objects of stone, terracotta, metal, glass, etc. were retrieved.

Stone Objects

The different types of stone objects include sculptures of deities, pestles of varying dimensions and other household items, inscribed slabs, etc. Among the listed sculptures mention may be made of Shiva *linga*, Vishnu, Krishna, Hanuman, Ganesha etc. A good number of architectural members found in different areas were also documented and duly photographed.

Terracotta Objects

Different types of terracotta objects recovered during the investigations, include figurines of deities, male and female figures, bricks and tiles, sling balls, etc. Fragmentary figures of Hanuman and Ganesha were found from debris in western wall area.

Potteries

Pottery sherds of different shapes and sizes were found in garbage and debris lying in different parts of the complex. Large concentrations were noticed in two specific areas – the debris accumulated near the western wall and in southern cellar. Heap of debris covering the large portion of western wall and soil dumped in S2 and S3 was removed to study buried features of the structure.

Almost the entire repertoire of recovered pottery falls within the general category of common red ware. The main types identified from collected material are - miniature pots, *ghara*, *lota*, *chillum*, *hookah* – base and pipe both, spouted pots, *surahis*, V-shaped bowls of various sizes locally known as *parai*, terracotta cups locally known as *purwa*, miniature tumblers, lamps of various shapes and sizes, etc. Pots



with recognizable shapes and in good condition were separated and some sherds were also collected.

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Bricks

Heap of debris contained large number of brickbats of different sizes including *Lakhauri* bricks/ tiles of different sizes. Among these, some complete specimens were also found. Some complete bricks found in cellar S2 were bearing date (स. 1881 – 1978).

Metal Objects

Some metal objects were found from the different locations during debris clearance. These objects include coins, tools, ornaments, etc. Corroded metal objects were given first aid chemical treatment at the site to arrest further deterioration and documented properly.

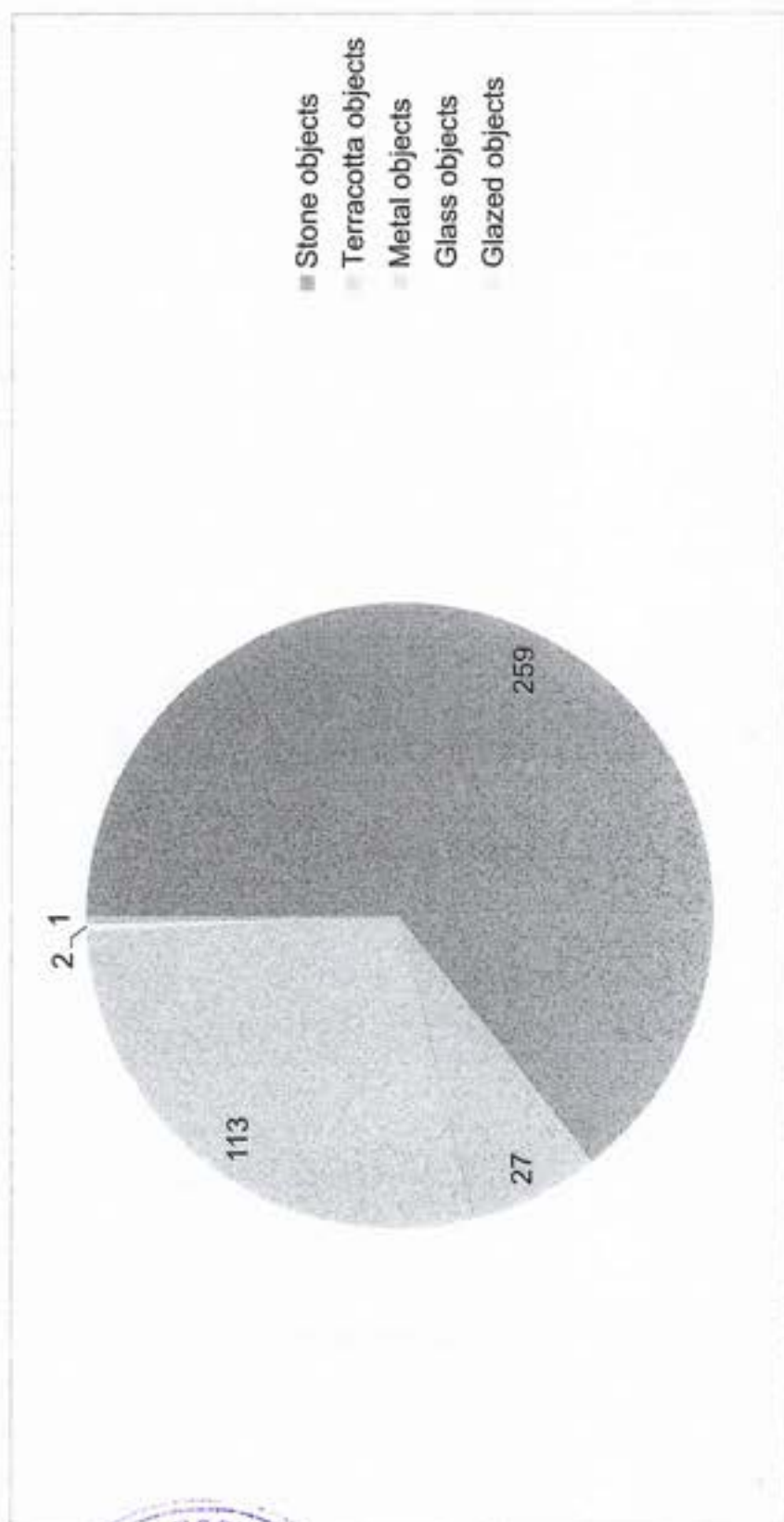
Among the metal objects copper coins were dominant in numbers. These coins belong to different periods. Three coins have legends in Persian were issued by Shah Alam. Numbers of British-India coins were found including a hoard of 64 coins. They include coins belonging to the East India Company, Queen Victoria, Edward VII and George V, and some were difficult to identify due to corrosion. One copper coin of Madhav Rao Scindia was also found. Modern Indian coins of varying denominations like 2 paisa, 3 paisa, 5 paisa, 10 paisa and 25 paisa were also found in debris. One foreign coin of 1 Dirham denomination of United Arab Emirate was also found. Some other fragmentary metal objects were also noticed which were highly corroded.

Glass Objects

During the survey two glass objects, i.e. a pendant and a broken Shiva *linga* were found. In addition, miniature globular pots with elongated neck were also found during debris clearance in cellar S2. Some fragmentary glass lids were also identified. Some broken piece of glass, probably the part of the bottles, etc. were also noticed in debris. One glazed object was also noticed.



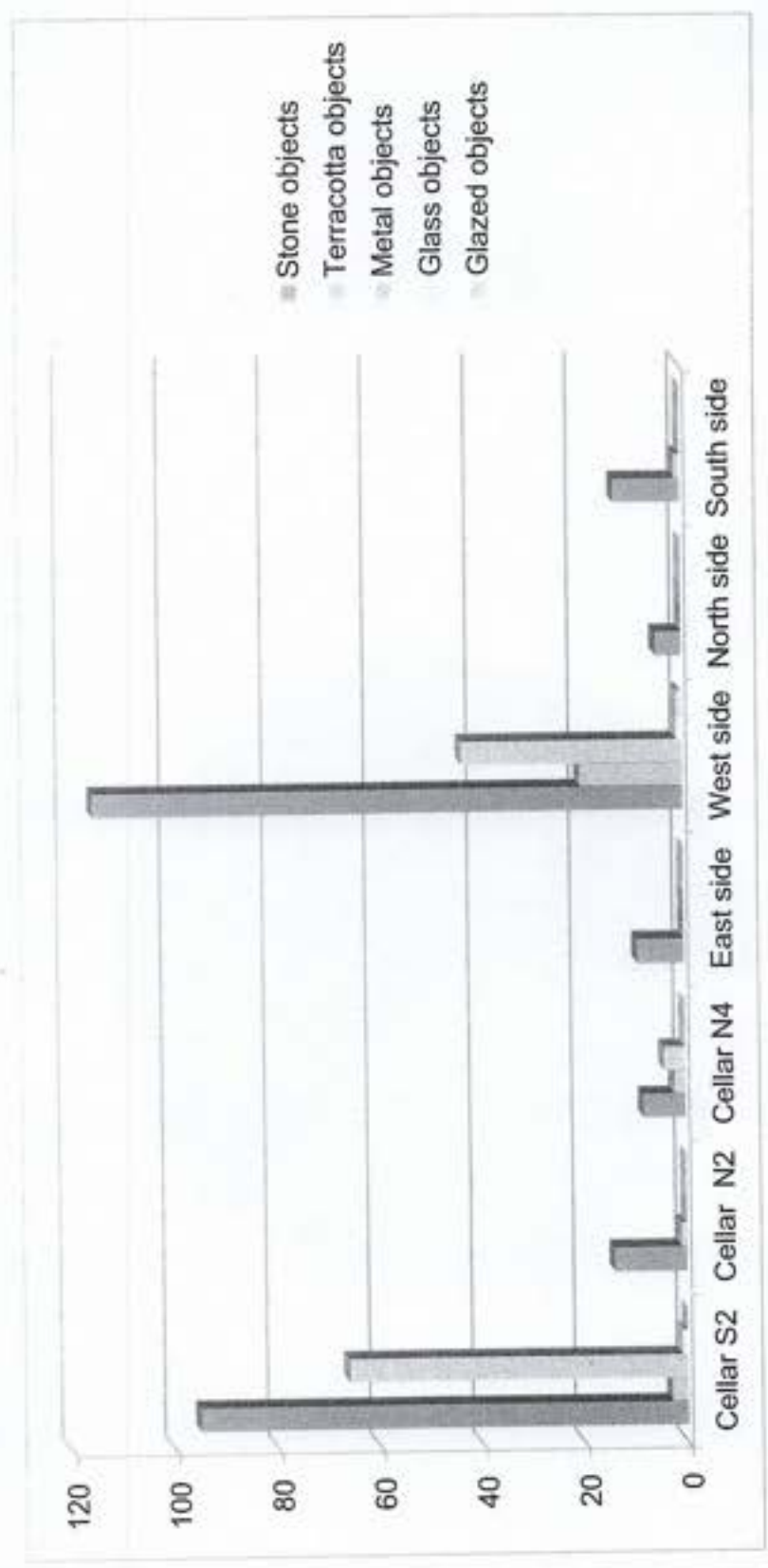
Graph 1: Objects



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Graph 2: Objects (Location wise)



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Table 1: Objects

Sl. No.	Objects	Cellar S2	Cellar N2	Cellar N4	East side	West side	North side	South side	Total
1.	Stone objects	95	14	8	9	115	5	13	259
2.	Terracotta objects	3	1	2	0	20	0	1	27
3.	Metal objects	66	0	4	0	43	0	0	113
4.	Glass objects	1	0	0	0	1	0	0	2
5.	Glazed object	0	0	0	0	1	0	0	1
	Total	165	15	14	9	180	5	14	402





Table 2: Stone Objects

Sl. No.	Objects	Cellar S2	Cellar N2	Cellar N4	East side	West side	North side	South side	Total
1.	Sculptures	25	1	4	1	24	0	0	55
2.	Architectural Members	54	13	0	8	84	5	12	176
3.	Inscribed slab	2	0	0	0	2	0	1	5
4.	House hold materials	14	0	4	0	4	0	0	21
5.	Miscellaneous	0	0	0	0	1	0	0	1
	Total	95	14	8	9	115	5	13	259

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Table 3: Stone Sculptures

Sl. No.	Objects	Cellar S2	Cellar N2	Cellar N4	East side	West side	North side	South side	Total
1.	Shiva linga	8	0	0	1	6	0	0	15
2.	Vishnu	2	1	0	0	0	0	0	3
3.	Makara	1	0	0	0	0	0	0	1
4.	Krishna	1	0	0	0	1	0	0	2
5.	Ganesha	2	0	0	0	1	0	0	3
6.	Hanuman	2	0	1	0	2	0	0	5
7.	Dwarpala	1	0	0	0	0	0	0	1
8.	Nandi	0	0	0	0	2	0	0	2
9.	Apasmarapurusha	0	0	0	0	1	0	0	1
10.	Votive shrine	1	0	0	0	0	0	0	1
11.	Fragments	4	0	3	0	7	0	0	14
12.	Miscellaneous	3	0	0	0	4	0	0	7
	Total	25	1	4	1	24	0	0	55

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Table 4: Terracotta objects

Sl. No.	Objects	Cellar S2	Cellar N2	Cellar N4	East side	West side	North side	South side	Total
1.	Figurines	2	1	2	0	17	0	1	23
2.	Sling ball	0	0	0	0	2	0	0	2
3.	Tiles	1	0	0	0	0	0	0	1
4.	Disc	0	0	0	0	1	0	0	1
	Total	3	1	2	0	20	0	1	27

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157

Table 5: Terracotta Figurines

Sl. No.	Objects	Cellar S2	Cellar N2	Cellar N4	East side	West side	North side	South side	Total
1.	Gods and Goddesses	1	0	0	0	1	0	0	2
2.	Figurines (Human)	1	1	2	0	13	0	1	18
3.	Figurines (Animal)	0	0	0	0	3	0	0	3
	Total	2	1	2	0	17	0	1	23



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Table 6: Metal objects

Sl. No.	Objects	Cellar S2	Cellar N2	Cellar N4	East side	West side	North side	South side	Total
1.	Iron	1	0	3	0	12	0	0	16
2.	Copper	65	0	1	0	18	0	0	84
3.	Aluminium	0	0	0	0	9	0	0	9
4.	Nickel	0	0	0	0	3	0	0	3
5.	Alloy	0	0	0	0	1	0	0	1
	Total	66	0	4	0	43	0	0	113



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159

Table 7: Coins hoard from Cellar S2

Sl. No.	Details of Coins	Year 1835	Year 1862	Year 1874	Year 1875	Year 1876	Year 1877	Total
1.	East India Company	36	0	0	0	0	0	36
2.	Victoria Queen	0	13	4	1	2	0	20
3.	Victoria Empress	0	0	0	0	0	8	8
	Total	36	13	4	1	2	8	64



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Table 8: Details of all Coins

Sl. No.	Coins	Cellar S2	Cellar N2	Cellar N4	East side	West side	North side	South side	Total
1.	Shah Alam Badshah II	0	0	0	0	3	0	0	3
2.	East India Company	36	0	0	0	4	0	0	40
3.	Victoria Queen	20	0	0	0	1	0	0	21
4.	Victoria Empress	8	0	0	0	0	0	0	8
5.	Edward VII King and Emperor	0	0	0	0	1	0	0	1
6.	King George VI	0	0	0	0	2	0	0	2
7.	1/12 Anna	0	0	0	0	1	0	0	1
8.	1/2 pice (1853)	0	0	0	0	1	0	0	1
9.	One Quarter Anna	0	0	0	0	1	0	0	1
10.	One pice (1943)	0	0	0	0	1	0	0	1
11.	Two paise	0	0	0	0	4	0	0	4
12.	Three paise	0	0	0	0	2	0	0	2
13.	Five paise	0	0	0	0	1	0	0	1
14.	Ten paise	0	0	0	0	1	0	0	1
15.	Twenty-Five paise	0	0	0	0	2	0	0	2

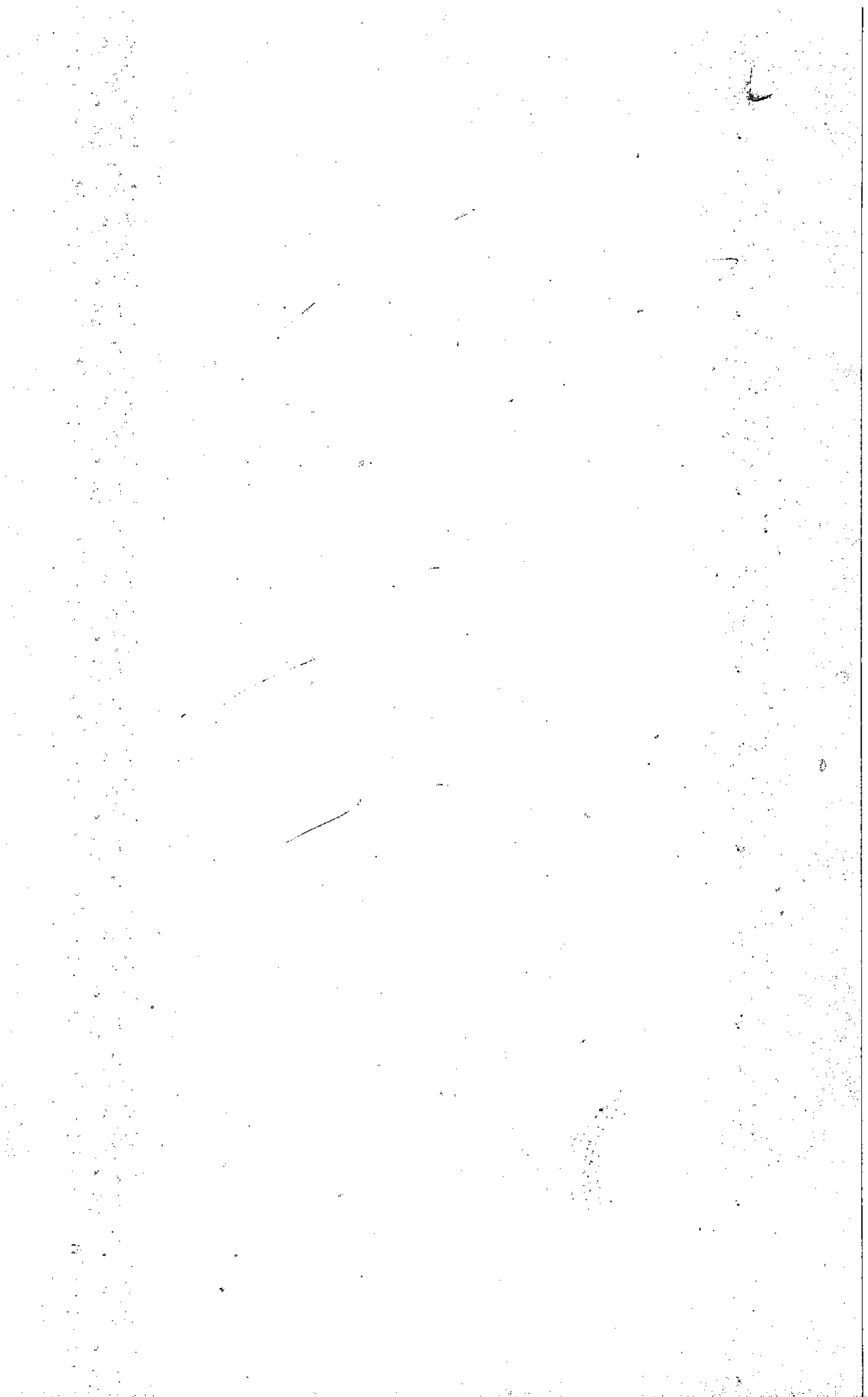
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Sl. No.	Coins	Cellar S2	Cellar N2	Cellar N4	East side	West side	North side	South side	Total
16.	Scindia Coin	0	0	0	0	1	0	0	1
17.	Un-deciphered Coins	0	0	0	0	2	0	0	2
18.	1 Dirham-Khalifa	0	0	0	0	1	0	0	1
	Total	64	0	0	0	29	0	0	93



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162





Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.), (in cm.)	Photograph
4	14	Bracket (broken) having floral designs on both the faces	Sandstone	Cellar (S2)	21 x 28 x 8	
5	15	Amalaka (broken)	Sandstone	Cellar (S2)	13 (H) x 25 (Dia.)	
6	16	Finial (broken) having inverted floral design	Sandstone	Cellar (S2)	14 (H) x 21 (Dia.)	



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Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.), (in cm.)	Photograph
7	17	Finial (broken) having inverted floral design	Sandstone	Cellar (S2)	15 (H) x 27 (Dia.)	
8	18	Finial in two tiers having inverted flower motif with constricted neck in between	Sandstone	Cellar (S2)	20 (H) x 15 (Dia.)	
9	19	Finial in two tiers having circular disc and an inverted floral motif with an iron rod fixed in the central socket	Sandstone	Cellar (S2)	18 (H) x 19 (Dia.)	



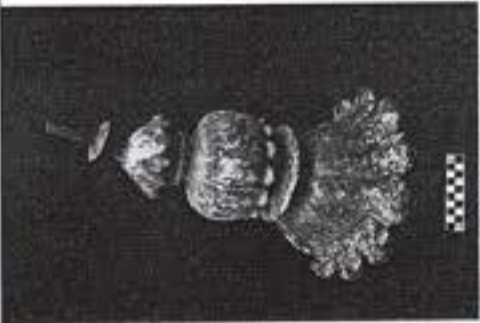
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Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.), (in cm.)	Photograph
10	20	Finial having floral depiction and petals in two tiers	Sandstone	Cellar (S2)	22 (H) x 15 (Dia.)	
11	22	Finial in three tiers with iron rod fixed in the central socket	Sandstone	Cellar (S2)	30 (H) x 21 (Dia.)	

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534



Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.), (in cm.)	Photograph
12	23	Finial in four tiers of receding dimensions	Sandstone	Cellar (S2)	40 (H) x 31 (Dia.)	
13	24	Dwarf parapet pillar (square cross-section) with finial having longitudinal grooves on two opposite sides and two round sockets on one plain side	Sandstone	Cellar (S2)	92 (H) x 10 (Dia.)	

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535

168

Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.), (in cm.)	Photograph
14	25	Finial (broken) with floral pattern	Sandstone	Cellar (S2)	9 (H) x 11 (Dia.)	
15	27	Finial of cylindrical shape broken in two parts and having a socket in the centre	Sandstone	Cellar (S2)	9.5 (H) x 11.5 (Dia.)	
16	31	Finial having inverted floral pattern with socket in the centre	Sandstone	Cellar (S2)	14 (H) x 25 (Dia.)	



Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.), (in cm.)	Photograph
17	32	Finial having inverted floral pattern with socket in the centre	Sandstone	Cellar (S2)	15 (H) x 20 (Dia.)	
18	33	Finial having inverted floral pattern with socket in the centre	Sandstone	Cellar (S2)	20 (H) x 14 (Dia.)	
19	34	Finial in two tiers of receding dimensions	Sandstone	Cellar (S2)	20 (H) x 14 (Dia.)	



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537



Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.), (in cm.)	Photograph
20	36	Finial in two tiers having circular disc and an inverted floral motif with an iron rod fixed in the central socket	Sandstone	Cellar (S2)	18 (H) x 19 (Dia.)	
21	37	Amalaka with snake hood and iron rod in the central socket	Sandstone	Cellar (S2)	14 (H) x 29 (Dia.)	
22	38	Amalaka with snake hood and socket in the centre	Sandstone	Cellar (S2)	14 (H) x 29 (Dia.)	

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530

Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.) (in cm.)	Photograph
23	39	Amalaka with snake hood and socket in the centre	Sandstone	Cellar (S2)	14 (H) x 29 (Dia.)	
24	51	Fragmentary architectural member having parallel horizontal bands	Sandstone	Cellar (S2)	22 x 21 x 3	
25	52	Fragmentary architectural member depicting band of floral motifs	Sandstone	Western chamber	15 x 25 x 15	



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S39

Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.), (in cm.)	Photograph
26	53	Decorated bracket	Sandstone	Cellar (S2)	48 x 21 x 9	
27	72	Fragmentary architectural member having trefoil motif	Sandstone	Cellar (S2)	10 x 11 x 3	
28	85	Fragmentary piece depicting floral motif in three tiers of receding dimensions	Sandstone	Cellar (S2)	9 x 5 x 4	



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Sho

Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.), (in cm.)	Photograph
29	89	Finial and portion of dwarf parapet pillar	Sandstone	Cellar (S2)	11 x 6 x 5	
30	94	Fragmentary architectural member (<i>Jali</i> design)	Sandstone	Cellar (S2)	13 x 10 x 5	
31	100	Finial and portion of dwarf parapet pillar	Sandstone	Cellar (S2)	12 x 7 x 6.5	



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Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.), (in cms.)	Photograph
32	101	Fragmentary stone Jali	Sandstone	Cellar (S2)	14 x 13 x 3.5	
33	102	Fragmentary architectural member	Sandstone	Cellar (S2)	10 x 4.5 x 4	
34	104	Finial of dwarf parapet pillar	Sandstone	Cellar (S2)	9 (H) x 10 (Dia.)	

60657
542



Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.), (in cm.)	Photograph
38	108	Finial (broken)	Sandstone	Cellar (S2)	14 (H) x 8 (W)	
39	117	Fragmentary architectural member	Sandstone	North side	9 (H) x 7.5 (W)	
40	118	Fragmentary architectural member having trefoil motif	Sandstone	Cellar (N2)	25 (H) x 46 (W) x 18 (Th.)	

40451
544

Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.), (in cm.)	Photograph
41	119	Fragmentary architectural member	Sandstone	Cellar (S2)	11 (H) x 3.5 (W)	
42	120	Fragmentary architectural member	Sandstone	Cellar (S2)	12 (H) x 8 (W)	
43	121	Fragmentary architectural member	Sandstone	Cellar (S2)	14 (H) x 10 (W)	



90451
545



Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.), (in cm.)	Photograph
44	132	Architectural member (broken)	Sandstone	Cellar (S2)	33 x 24 x 7	
45	133	Architectural member (broken) having parallel circular grooves	Sandstone	Cellar (S2)	14 (H) x 12 (W)	
46	134	Bracket (broken)	Sandstone	Cellar (S2)	31 x 16 x 6	

60497
548

Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.), (in cm.)	Photograph
47	135	Fragmentary dwarf parapet pillar (square cross-section) having longitudinal grooves on two opposite sides	Sandstone	Cellar (S2)	21 x 9 x 9	
48	136	Fragmentary dwarf parapet pillar (square cross-section) having longitudinal grooves on two opposite sides	Sandstone	Cellar (S2)	19.5 x 9.5 x 9	
49	137	Fragmentary dwarf parapet pillar (square cross-section) having longitudinal grooves on two opposite sides	Sandstone	Cellar (S2)	25 x 8.5 x 8	



40627
54



Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.), (in cm.)	Photograph
50	138	Fragmentary dwarf parapet pillar (square cross-section) having longitudinal grooves on two adjacent sides	Sandstone	Cellar (S2)	17 x 8 x 8	
51	139	Fragmentary architectural member	Sandstone	Northwest side	12 (H) x 11 (W)	
52	140	Fragmentary architectural member	Sandstone	Northwest side	15 x 13 x 5	

40657
540

Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.), (in cm.)	Photograph
53	141	Fragmentary architectural member	Sandstone	Northwest side	16 (H) x 4 (W)	
54	142	Fragmentary architectural member	Sandstone	Northwest side	14 x 8 x 6	
55	143	Fragmentary architectural member depicting petal motif	Sandstone	Northwest side	11 x 9 x 4	



10437
549



Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.), (in cm.)	Photograph
56	144	Fragmentary architectural member depicting floral motif	Sandstone	Western chamber	11 (H) x 7.5 (W)	
57	145	Fragmentary architectural member	Sandstone	Northwest side	25 x 15 x 13	
58	146	Fragmentary architectural member	Sandstone	Southwest side	17 x 8 x 3.5	

60427
550



Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.), (in cm.)	Photograph
59	147	Corner architectural member decorated with the trefoil motifs on two sides	Sandstone	Southwest side	23 (H) x 20 (W)	
60	148	Craved stone with geometrical design	Sandstone	Western chamber	25.5 x 9 x 7	
61	149	Fragmentary architectural member	Sandstone	Western chamber	29 x 9 x 7	

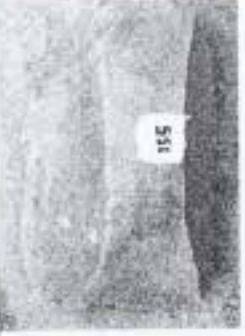
6067
551

Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.), (in cm.)	Photograph
62	150	Fragmentary architectural member	Sandstone	Southwest side	25.5 x 20 x 12	
63	151	Dwarf parapet pillar (broken)	Sandstone	Cellar (S2)	23 x 8 x 7	
64	152	Dwarf parapet pillar (broken)	Sandstone	Cellar (S2)	29 x 10.5 x 6.5	



60/59
SS2



Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.), (in cm.)	Photograph
65	153	Fragmentary architectural member	Sandstone	Cellar (S2)	15.5 (H) x 15.5 (W)	
66	154	Large bracket	Sandstone	Southwest side	63 x 63 x 25	
67	155	Fragmentary architectural member	Sandstone	Western chamber	34 x 23.5 x 12.5	

6047
553



Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.), (in cm.)	Photograph
68	158	Fragmentary architectural member	Sandstone	Cellar (S2)	14 x 8.5 x 6.5	
69	159	Fragmentary architectural member	Sandstone	Cellar (S2)	17.5 x 7 x 5	
70	168	Bracket	Sandstone	Western chamber	20.5 x 18 x 19	

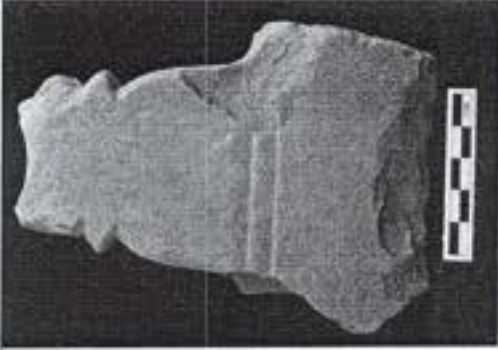
40457
554

Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.) (in cm.)	Photograph
71	171	Fragmentary architectural member	Sandstone	Western chamber	19 x 13.5 x 9.5	
72	172	Fragmentary architectural member having geometrical motif	Sandstone	Western chamber	13 (H) x 10 (W)	
73	173	Bracket (broken)	Sandstone	Western chamber	23.5 x 11.5 x 7.5	



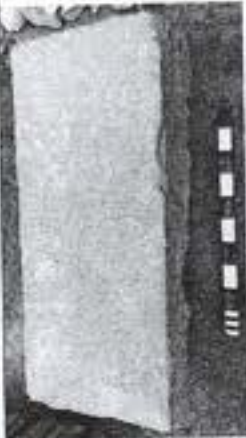
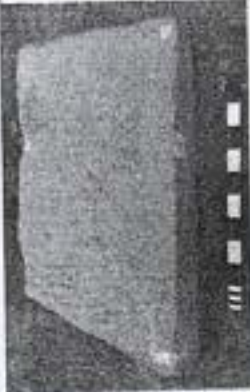
60/77
555



Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.), (in cm.)	Photograph
74	174	Fragmentary architectural member	Sandstone	Southwest side	23.5 x 11.5 x 7.5	
75	175	Finial (broken)	Sandstone	Southwest side	13 (H) x 12.5 (Dia.)	

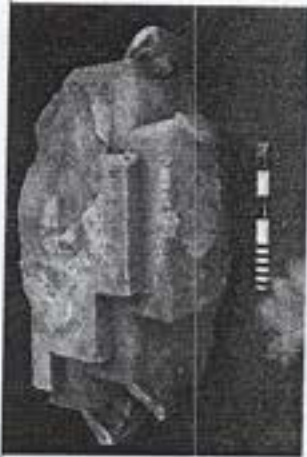
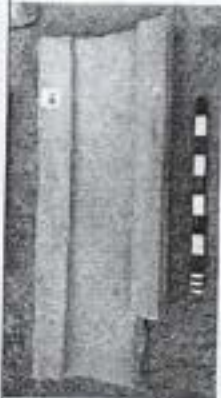
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558



Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.), (in cm.)	Photograph
76	176	Fragmentary architectural member	Sandstone	Southwest side	14.5 x 11.5 x 6	
77	177	Dressed stone block with mason's mark (double knot)	Sandstone	Southwest side	80 x 35 x 21	
78	178	Dressed stone block with mason's mark (trisected triangle)	Sandstone	Southwest side	71 x 37 x 18	

40697
557

40677
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Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.), (in cm.)	Photograph
79	179	Architectural member with ratha projections and trefoil motif	Sandstone	Southwest side	82 x 41 x 28	
80	180	<i>Pranala</i>	Sandstone	Northwest side	93 x 12 x 35	
81	181	Architectural member having <i>pandasa</i> motif	Sandstone	Western chamber	62 x 36 x 14	





Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.), (in cm.)	Photograph
82	191	Fragmentary architectural member	Sandstone	Western chamber	7.5 x 2 x 3	
83	192	Broken pilaster with faceted shaft having lotus depiction at one end	Sandstone	Northwest side	73 x 27 x 15	

40677
559

Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.), (in cm.)	Photograph
84	193	Fragmentary architectural member	Sandstone	Western chamber	22 x 26 x 21	
85	194	Fragmentary architectural member	Sandstone	Western chamber	15 (H) x 9 (W)	



40457
580



Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.), (in cm.)	Photograph
86	195	Fragmentary architectural member	Sandstone	Western chamber	11.5 (H) x 14 (W)	
87	196	Fragmentary architectural member with trefoil motif (broken)	Sandstone	Western chamber	35 x 25 x 13	

40471
561



Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.), (in cm.)	Photograph
88	197	Fragmentary architectural member with trefoil motif	Sandstone	Northwest side	60 x 30 x 15	
89	198	Broken pilaster having faceted shaft	Sandstone	Northwest side	28 x 38 x 14	

50457
562



Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.), (in cm.)	Photograph
90	199	Fragmentary architectural member	Sandstone	Western chamber	20 (H) x 21 (W)	
91	200	Fragmentary architectural member	Sandstone	Western chamber	34 (H) x 24 (W)	

40457
563



Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.), (in cm.)	Photograph
92	201	Fragmentary architectural member	Sandstone	Western chamber	13 (H) x 14 (W)	
93	202	Fragmentary architectural member with floral decorations and pendants	Sandstone	North side	22 x 20 x 5.5	

40451
564

Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.), (in cm.)	Photograph
94	203	Fragment of a decorated slab	Sandstone	Western chamber	15 (H) x 14 (W)	
95	204	Broken finial decorated with lotus petals in four tiers	Sandstone	North side	17 (H)	

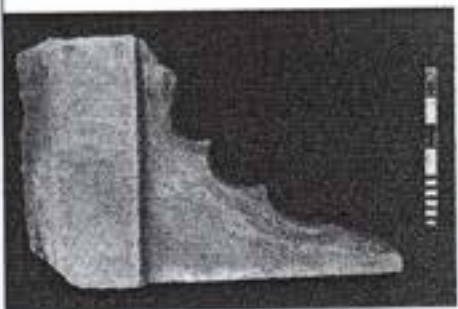


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565



Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.), (in cm.)	Photograph
96	211	Decorated pilaster having ridged shaft with multi-petal floral motifs at either end	Sandstone	Cellar (N2)	195 x 24 x 23	
97	212	Decorated pilaster having ridged shaft with multi-petal floral motifs at either end	Sandstone	Cellar (N2)	190 x 22 x 24	
98	213	Half broken decorated pilaster having ridged shaft with multi-petal floral motifs at either end	Sandstone	Cellar (N2)	89 x 24 x 19	
99	214	Half broken decorated pilaster having ridged shaft with multi-petal floral motifs at either end	Sandstone	Cellar (N2)	106 x 24 x 20	

40657
566

Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.), (in cm.)	Photograph
100	215	Decorated pilaster having ridged shaft with multi-petal floral motifs at either end	Sandstone	Cellar (N2)	196 x 24 x 19	
101	216	Architectural member having miniature battlement motif	Sandstone	Cellar (N2)	49 x 12 x 11	
102	217	Fragment of a cusped arch	Sandstone	Northwest side	72 x 54 x 21	



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Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.), (in cm.)	Photograph
103	218	Fragment of a cusped arch	Sandstone	Northwest side	44 x 66 x 18	
104	219	Fragmentary part of a cusped arch	Sandstone	Northwest side	36 x 33 x 19	

4047
 560



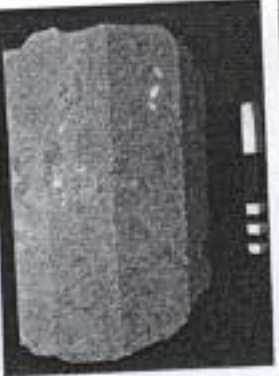
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105	220	Fragmentary architectural member	Sandstone	Northwest side	20 x 16 x 10	
106	221	Fragmentary architectural member having floral motif	Sandstone	Northwest side	54 x 27 x 23	

40657
569



Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.), (in cm.)	Photograph
107	222	Bracket with floral depiction	Sandstone	Cellar (S2)	32 x 23 x 14	
108	223	Bracket with floral depiction	Sandstone	Cellar (S2)	32 x 23 x 14	

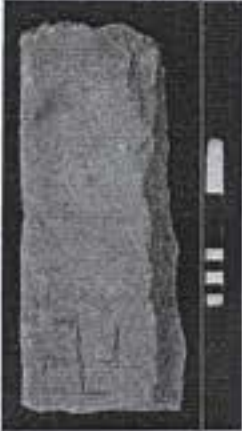
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570

Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.), (in cm.)	Photograph
109	224	Fragmentary architectural member having floral decoration	Sandstone	Western chamber	17 x 17 x 17	
110	225	Faceted pilaster (broken)	Sandstone	Northwest side	34 x 24 x 15	
111	226	Fragmentary part of a cusped arch	Sandstone	Northwest side	22 x 25 x 15	



40457
571



Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.) (in cm.)	Photograph
112	227	Fragmentary architectural member having linear projections	Sandstone	Northwest side	26 x 20 x 20	
113	229	Dressed stone with mason's mark (Swastik)	Sandstone	Western chamber	30 x 14 x 10	

40/51
572

Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.), (In cm.)	Photograph
114	230	Fragmentary architectural member with floral design	Sandstone	Western chamber	22 x 32 x 36	
115	231	Fragmentary architectural member having decoration	Sandstone	Western chamber	30 x 18 x 31	



40457
573



2016

Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.), (in cm.)	Photograph
119	238	Fragmentary architectural member having trefoil motif	Stone	Northwest side	14 x 27 x 11	
120	239	Fragmentary architectural member	Stone	Western chamber	9.5 x 21 x 10	



4047
575

Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.), (in cm.)	Photograph
121	240	Fragmentary architectural member	Stone	Western chamber	7 x 12 x 7.5	
122	241	Fragmentary architectural member	Stone	Western chamber	5.5 x 5 x 5	



40457
SKS

Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.), (in cm.)	Photograph
123	242	Carved architectural fragment	Stone	Western chamber	16.5 x 4 x 9	
124	243	Fragmentary architectural member	Stone	Western chamber	11 x 7.5 x 5	



40451
597

Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.), (in cm.)	Photograph
125	244	Bracket with petal motif	Stone	Northwest side	18.5 x 16.8 x 5	
126	245	Fragmentary architectural member	Stone	Northwest side	11 x 13 x 10	



4065
578

Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.) (in cm.)	Photograph
127	246	Fragmentary architectural member	Stone	North side	8 x 13 x 19	
128	247	Fragmentary architectural member	Stone	Western chamber	9 x 7.5 x 7	
129	248	Finial of dwarf parapet pillar	Stone	Western chamber	12 (H) x 8.5 (Dia.)	



40657
579

Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.), (in cm.)	Photograph
130	249	Fragmentary architectural member	Stone	Western chamber	13.5 x 18 x 22	
131	250	Finial (broken)	Stone	Northwest side	7 (H) x 6 (Dia.)	
132	251	Fragmentary architectural member (Jali)	Stone	Western chamber	8 x 16 x 4.5	



404/97
500

40651
501

Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.) (in cm.)	Photograph
133	252	Faceted pilaster (broken)	Stone	Northwest side	59 x 27 x 50	
134	253	Faceted pilaster (broken)	Stone	Northwest side	133 x 32 x 17	
135	254	Base part of pilaster with floral design	Stone	Northwest side	18 x 27 x 15	



Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.), (in cm.)	Photograph
136	255	Fragmentary architectural member	Stone	Western chamber	30 x 29 x 15	
137	256	Finial in three tiers	Stone	Northwest side	14 (H) x 12 (Dia.)	
138	257	Fragmentary architectural member	Stone	Northwest side	12 x 54 x 40	



10471
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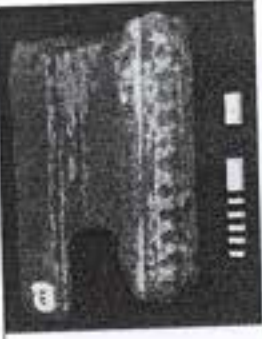
Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.) (in cm.)	Photograph
139	258	Broken part of pilaster	Stone	Northwest side	78 x 30 x 10	
140	258A	Broken part of pilaster	Stone	Northwest side	55 x 30 x 10	
141	262	Architectural member having two square sockets, one is broken	Stone	South side	115 x 46 x 8	

40427
503



Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.), (in cm.)	Photograph
142	263	Fragmentary architectural member having trefoil motif	Stone	South side	19 x 88 x 37.5	
143	264	Fragmentary architectural member with Pandasa	Stone	Western chamber	13 x 23 x 16	
144	265	Fragmentary architectural member	Stone	Western chamber	10 x 10.5 x 14.8	

40677
584

Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.), (in cm.)	Photograph
145	266	Cylindrical pillar (broken)	Stone	East side	30 x 24 x 14.8	
146	268	Dwarf parapet pillar (square cross-section) with longitudinal groove on two adjacent sides	Stone	South side	46 x 10 x 10	
147	269	Decorated fragmentary architectural member	Stone	South side	48 x 31 x 7.8	



50451
505

Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.), (in cm.)	Photograph
148	270	Faceted pilaster (broken)	Stone	South side	80 x 30 x 19	
149	271	Dwarf parapet pillar (square cross-section) with finial and having longitudinal grooves on one side	Stone	South side	110 x 10 x 11	



4047
586



Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.), (in cm.)	Photograph
150	272	Pilaster with finial having longitudinal grooves and two round sockets each on two opposite sides	Stone	South side	75 x 11 x 11	
151	273	Dwarf pillar of parapet with finial and longitudinal grooves on two opposite sides	Stone	South side	92 x 10 x 10	

9067
507

Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.) (in cm.)	Photograph
152	274	Fragmentary architectural member	Stone	Southwest side	8.5 x 24.5 x 18	
153	275	Fragmentary architectural member	Stone	Southwest side	30 x 24.5 x 7.5	
154	276	Octagonal pillar (broken)	Stone	South side	32.5 (H) x 14.5 (Dia.)	



4047
585
220



Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.), (In cm.)	Photograph
155	277	Decorated architectural member (broken)	Stone	South side	78.5 x 18 x 8	
156	278	Octagonal pillar (broken)	Stone	South side	89 (H) x 15 (Dia.)	
157	280	Dwarf pillar	Stone	South side	64 x 12 x 8.5	
158	281	Fragmentary architectural member depicting Pandasa	Stone	Western chamber	9.5 x 42 x 17	

60457
583

Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.), (in cm.)	Photograph
159	283	Fragmentary architectural member	Stone	Western chamber	12 x 8.5 x 5	
160	284	Dwarf parapet pillar (square cross-section) with finial and longitudinal groove on two adjacent sides and two circular sockets on one grooved side	Stone	East side	95 x 10 x 10	
161	285	Dwarf parapet pillar (square cross-section) with finial and longitudinal grooves on two opposite sides (broken)	Stone	East side	55 x 10 x 10	



4068
590

Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.) (in cm.)	Photograph
162	292	Architectural fragment depicting a half lotus medallion at the base framed by tiered floral arrangement (left one missing). Square tenon is seen at the base. On the top is floral arrangement in two tiers.	Stone	Northwest side	114 x 42 x 25	
163	294	Cylindrical pillar with slight taper (broken)	Stone	East side	45 (L) x 15 (Dia.)	
164	294A	Cylindrical pillar with slight taper (broken)	Stone	East side	84.5 (L) x 18 (Dia.)	



50657/59



Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.), (in cm.)	Photograph
165	295	Cylindrical pillar with slight taper (broken)	Stone	East side	71 (L) x 13 (Dia.)	
166	295A	Cylindrical pillar with slight taper (broken)	Stone	East side	37 (L) x 14 (Dia.)	
167	295B	Cylindrical pillar with slight taper (broken)	Stone	East side	30 (L) x 14 (Dia.)	
168	312	Fragmentary architectural member having floral motif	Stone	Cellar (N2)	26 x 32 x 25	

4047
592



Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.), (in cm.)	Photograph
169	313	Broken bracket with finial	Stone	Cellar (N2)	21 x 17 x 11	
170	314	Broken dwarf parapet pillar with finial	Stone	Cellar (N2)	24 x 9 x 9	

6047
593



Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.), (in cm.)	Photograph
171	315	Fragmentary dwarf parapet pillar with finial	Stone	Cellar (N2)	22 x 9 x 9	
172	316	Fragmentary dwarf parapet pillar	Stone	Cellar (N2)	21 x 9 x 9	
173	317	Stone slab depicting trefoil motif	Stone	Cellar (N2)	69 x 42 x 9	

4047
594



Sl. No.	Acc. No.	Description	Material	Location	Measurement Height (H), Width (W), Diameter (Dia.) / Thickness (Th.), (in cm.)	Photograph
174	318	Broken stone block contains bracket drawing	Stone	Northwest side	112 x 83.5 x 21	
175	319	Architectural fragment having trefoil motif	Stone	Northwest side	119 x 57 x 30	
176	320	Architectural fragment	Stone	North side	65 x 55 x 18	

4049
595

1

Scientific Investigation/ Survey at
Settlement Plot No. 9130, District Varanasi

(Report submitted to the Hon'ble District Court, Varanasi)

Prof. Alok Tripathi

with contributions from

Dr Goutami Bhattacharya, Dr Shubha Majumder, Dr Raj Kumar Patel,
Dr Abinash Mohanty, Dr Izhar Alam Hashmi, Dr Aftab Hussain,
Dr Niraj Kumar Mishra, Dr Vinay Kumar Roy

Archaeological Survey of India
2023



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Scientific Investigation/ Survey at
Settlement Plot No. 9130, District Varanasi

(Report submitted to the Hon'ble District Court, Varanasi)

Volume 4
Illustrations



Archaeological Survey of India
2023

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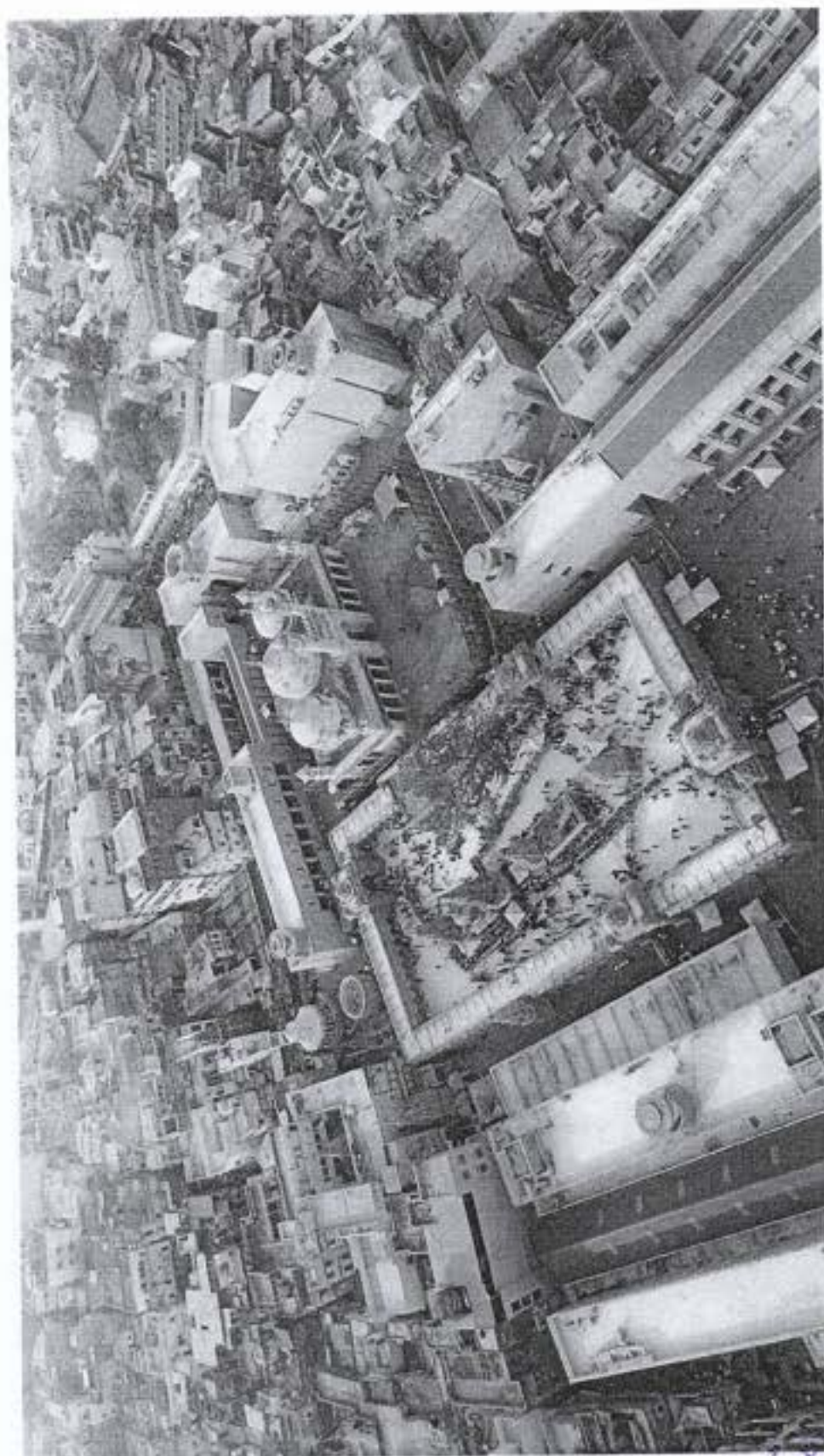


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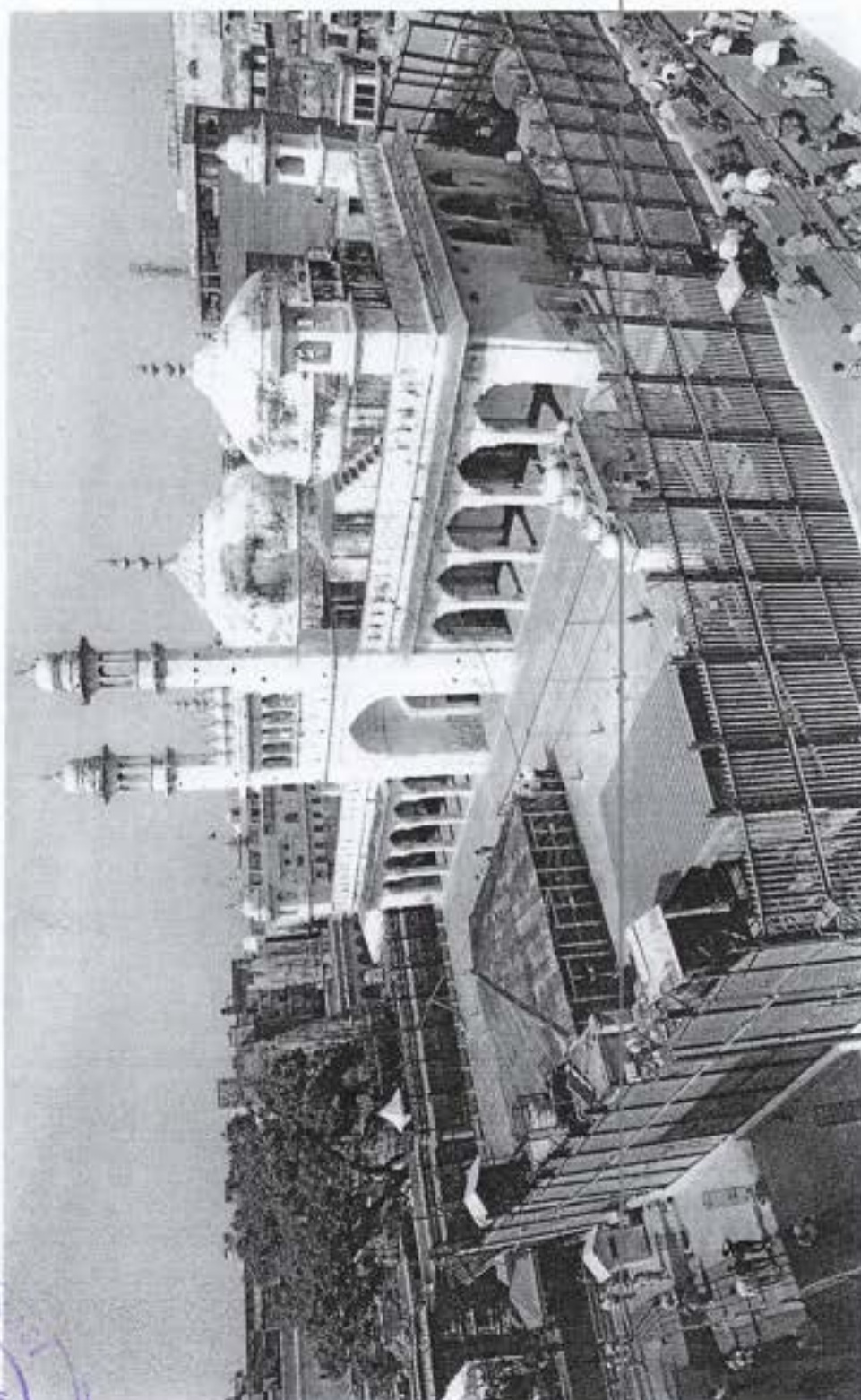


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Settlement Plot No. 9130: Image showing location (source: SKVTT, Varanasi)





Existing Structure: General view from northeast

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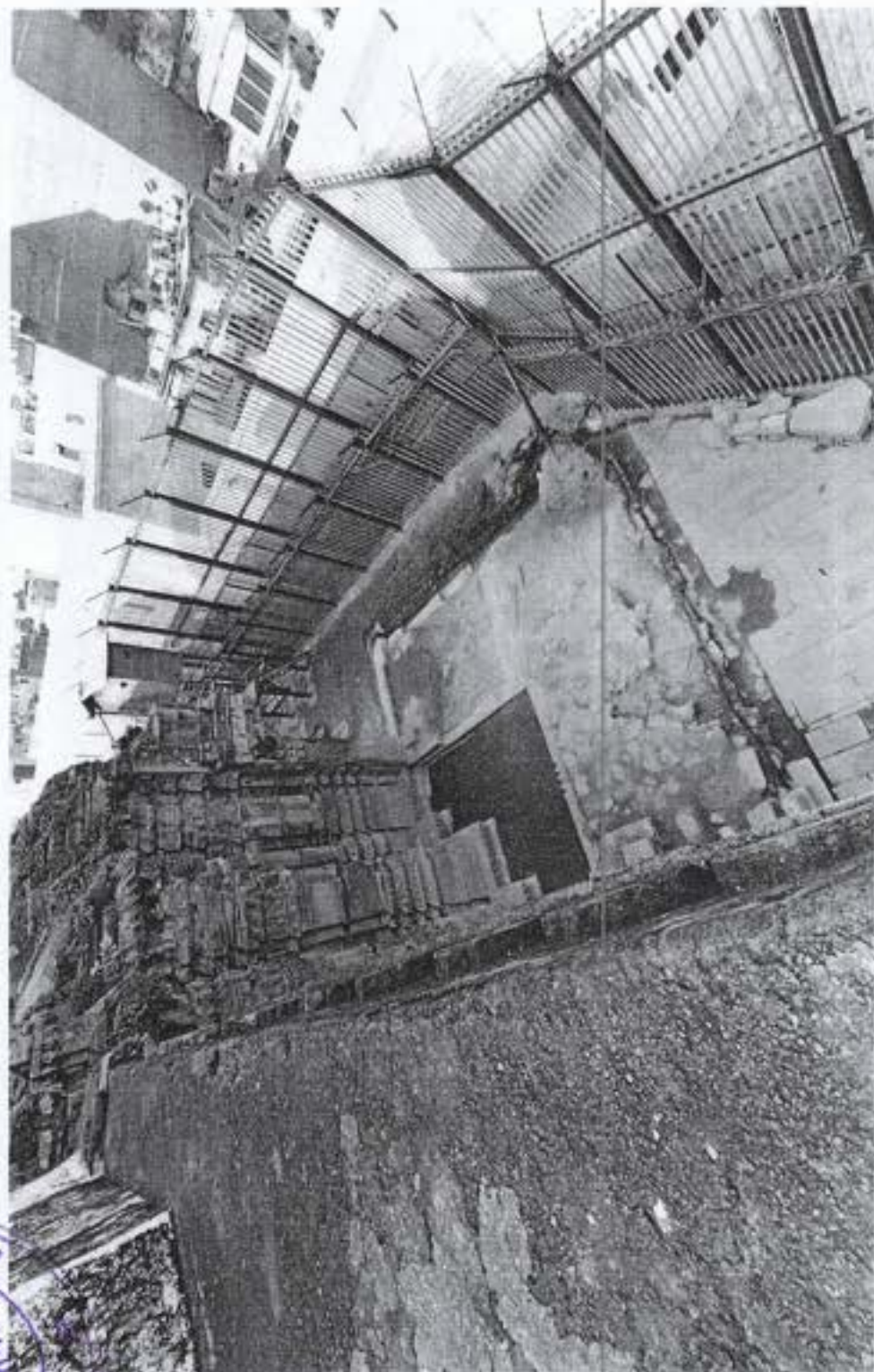


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Representatives of the parties during the survey work



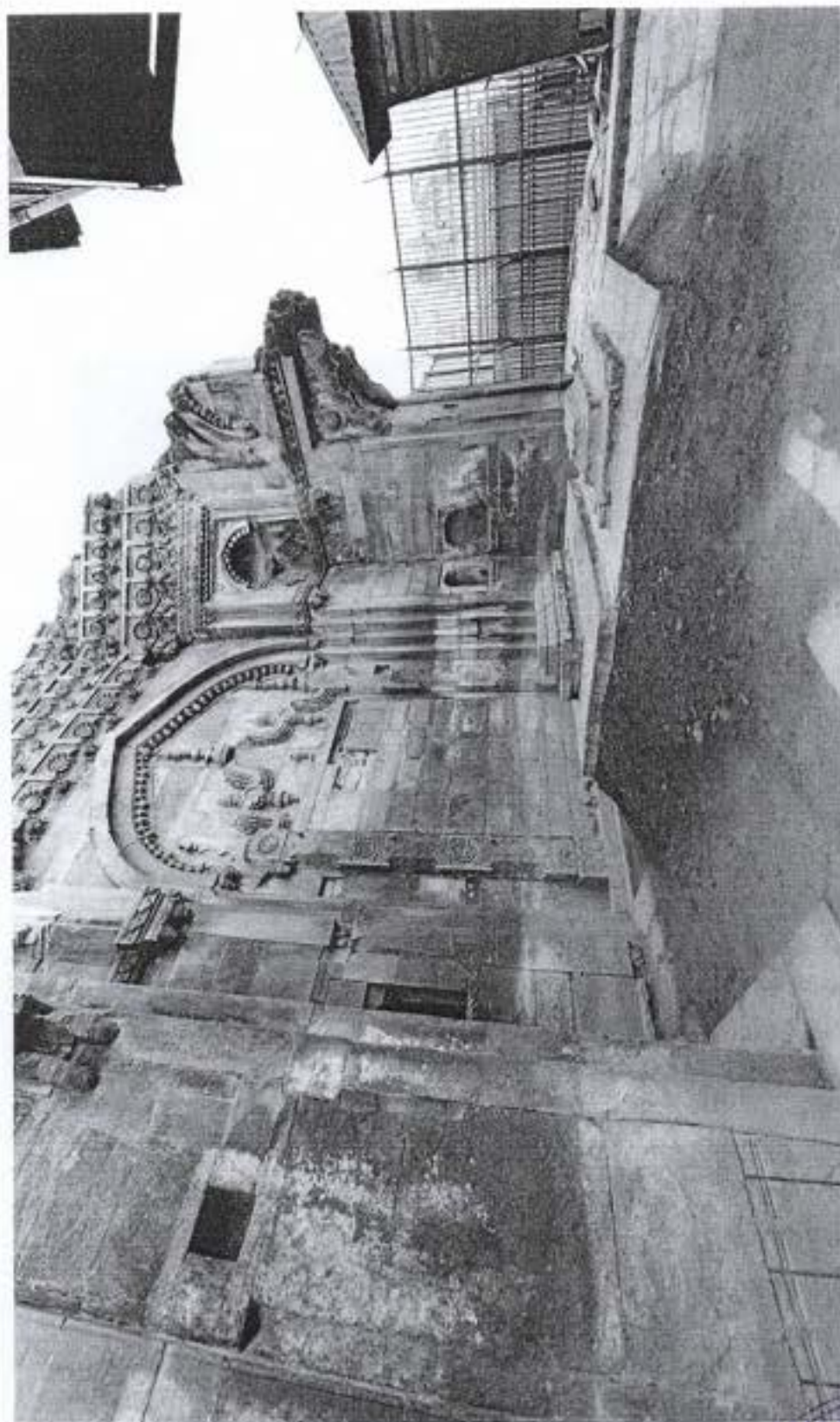


Northwest Side: General view

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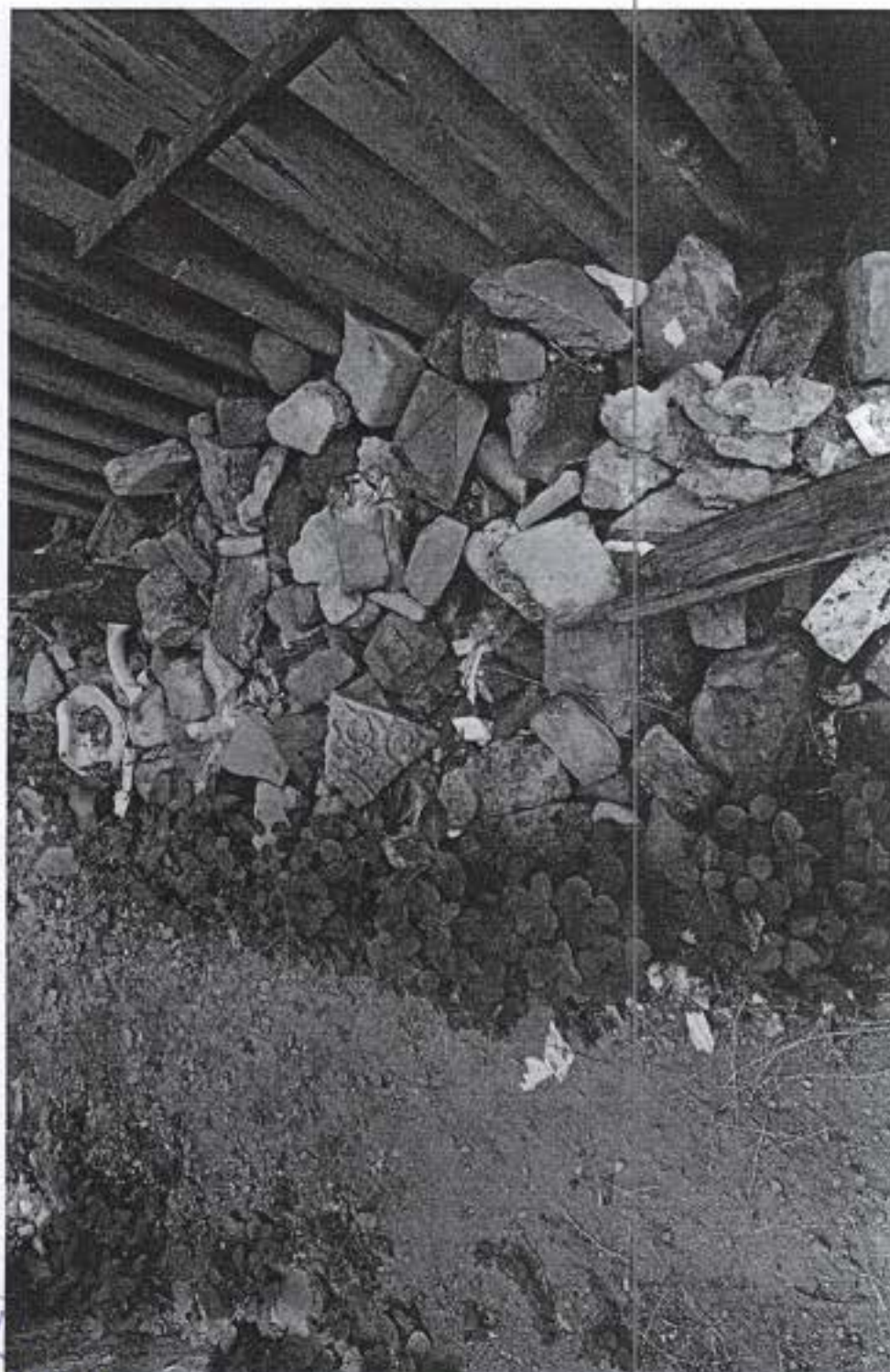
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Western Chamber: General view



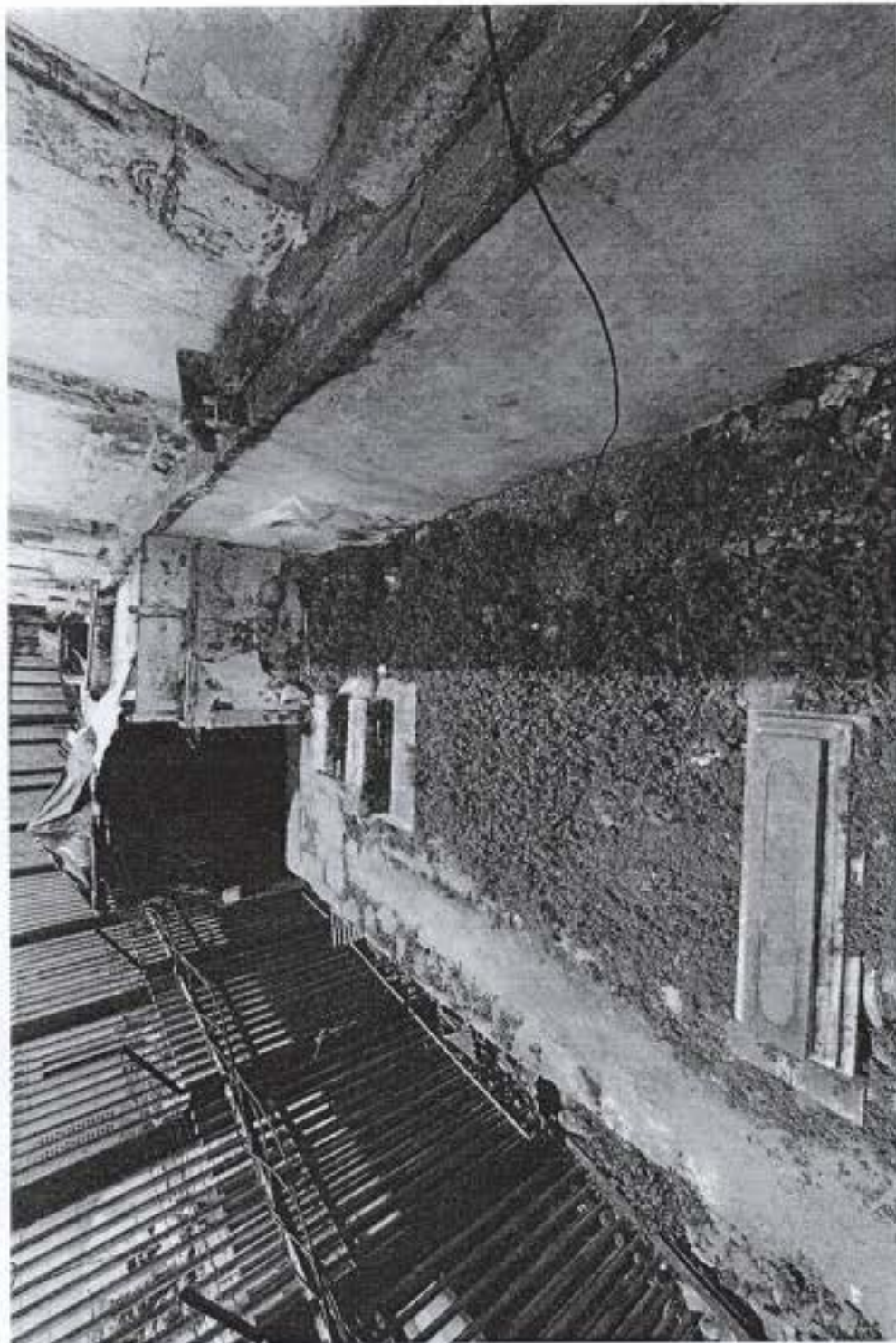
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North Side: Heap of debris



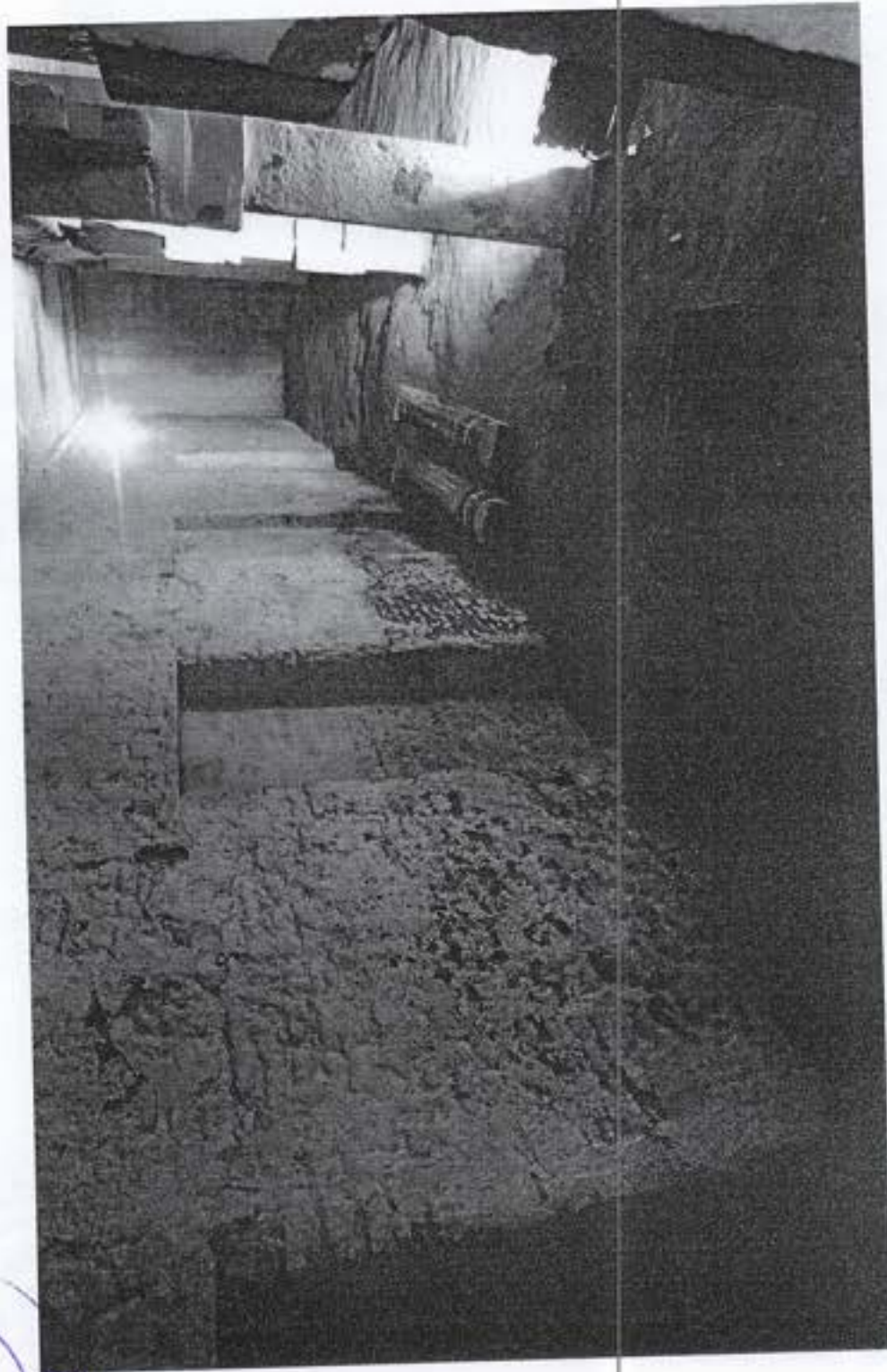
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North Side: Grave area before cleaning



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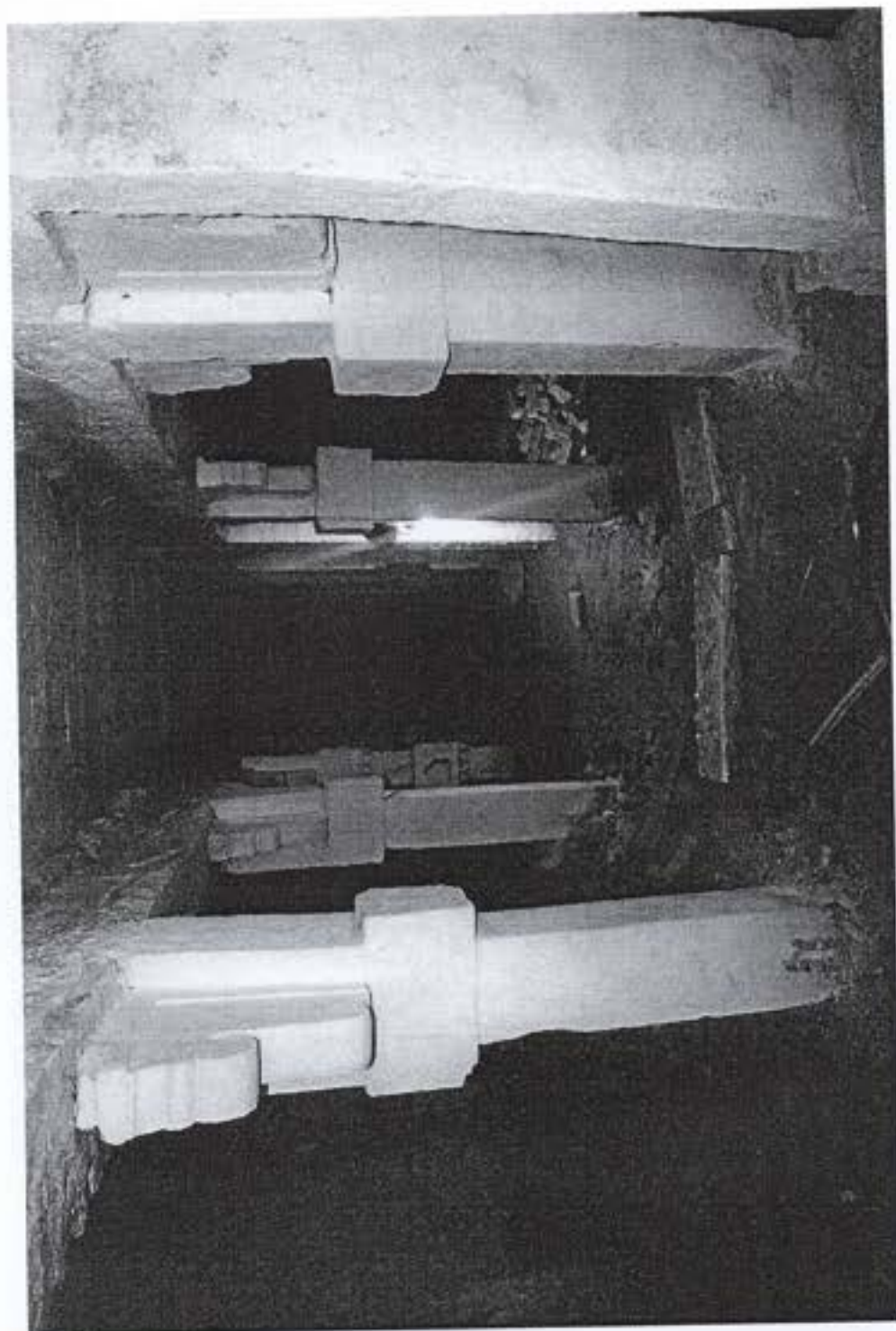


Cellar N1: Blocked entrances in western wall



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Cellar N2: Nave, before cleaning



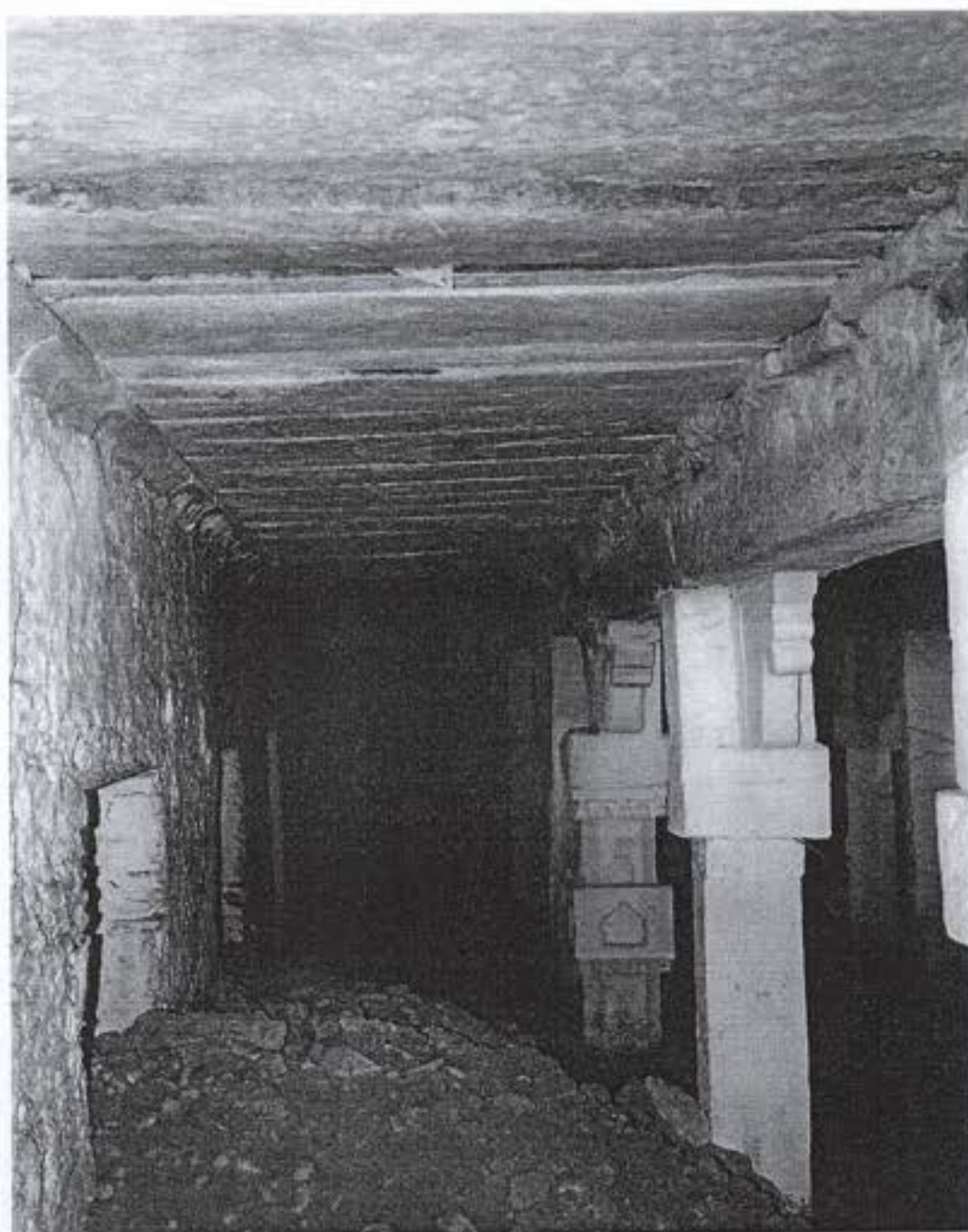


Cellar N2: Nave, after cleaning

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Cellar N2: Eastern aisle, before



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Cellar N2: Eastern aisle, after cleaning



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Cellar N2: Western aisle, before cleaning



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Cellar N2: Western aisle, after cleaning



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Cellar N2: Pillar base, before cleaning



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Cellar N2: Pillar base, after cleaning



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Cellar N2: Decorated pillar





Cellar N2: Pilaster exposed during clearance

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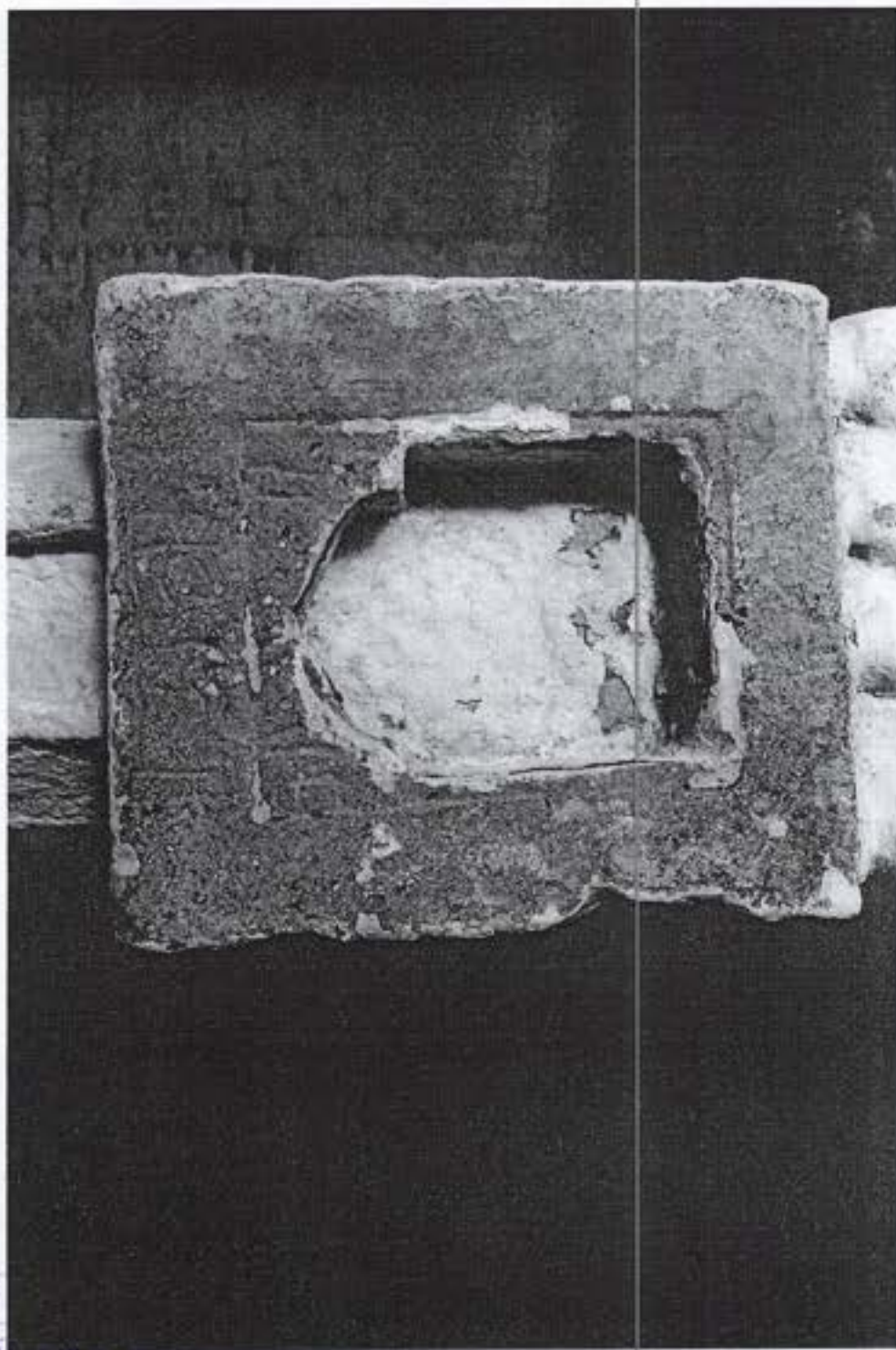
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Cellar N2: Inscription on pillar

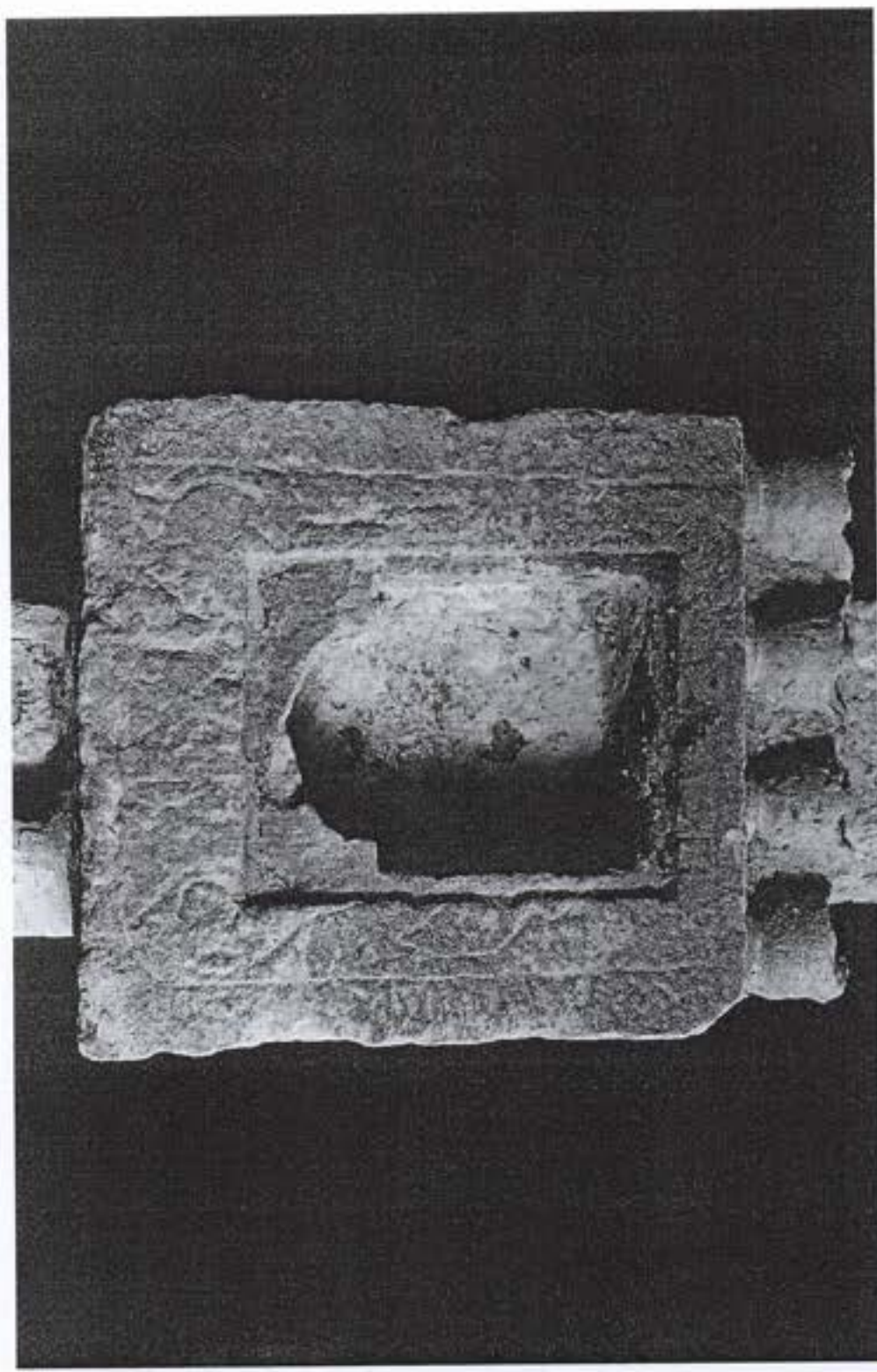




Cellar N2: Inscription on pillar

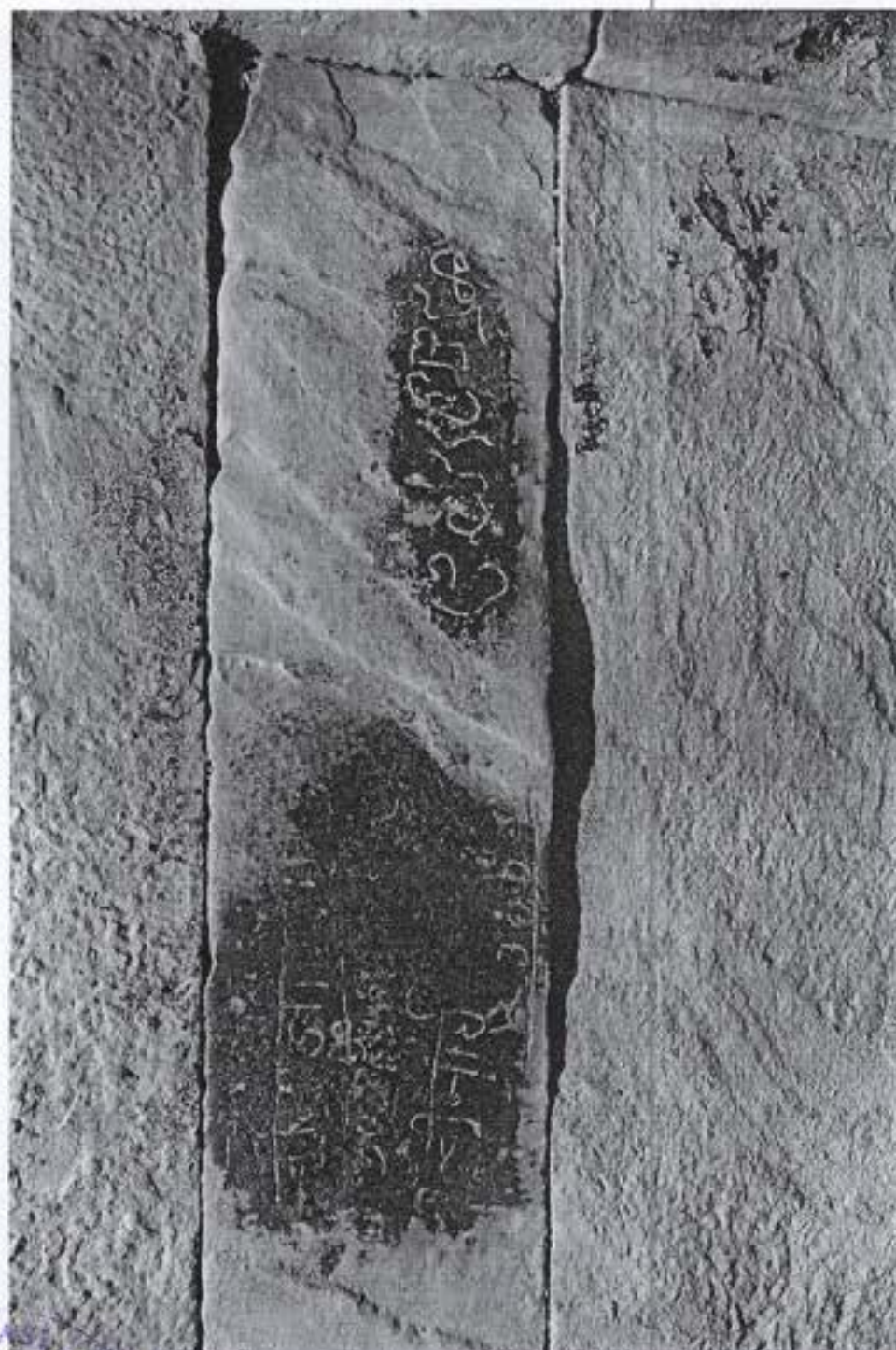
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Cellar N2: Inscription on pillar





Cellar N2: Inscriptions on ceiling

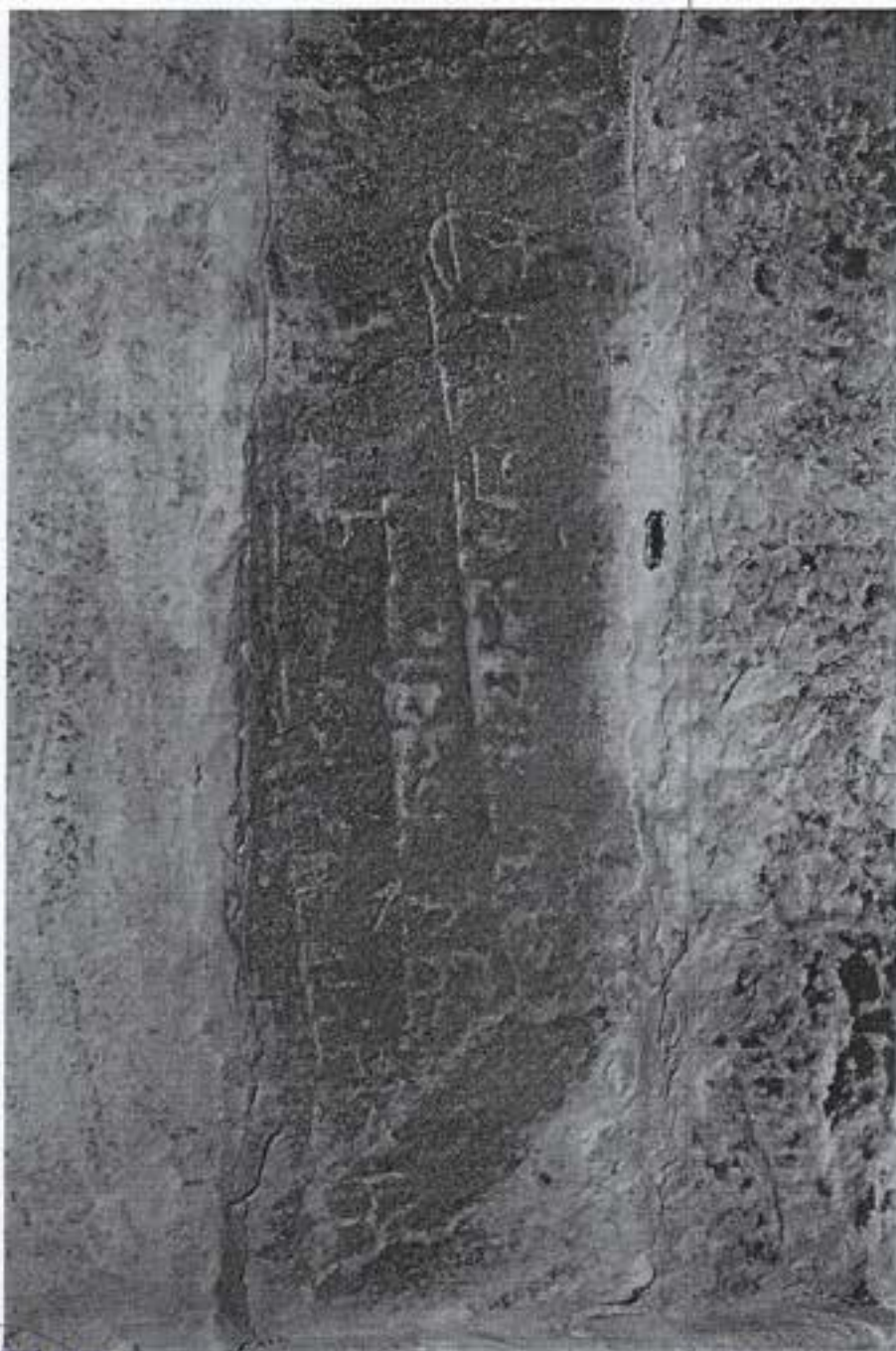
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Cellar N2: Inscriptions on ceiling





Cellar N2: Inscriptions on ceiling

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Cellar N2: Inscriptions on ceiling



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Cellar N2: Copying inscription on ceiling





Cellar N2: Copying inscription on pillar



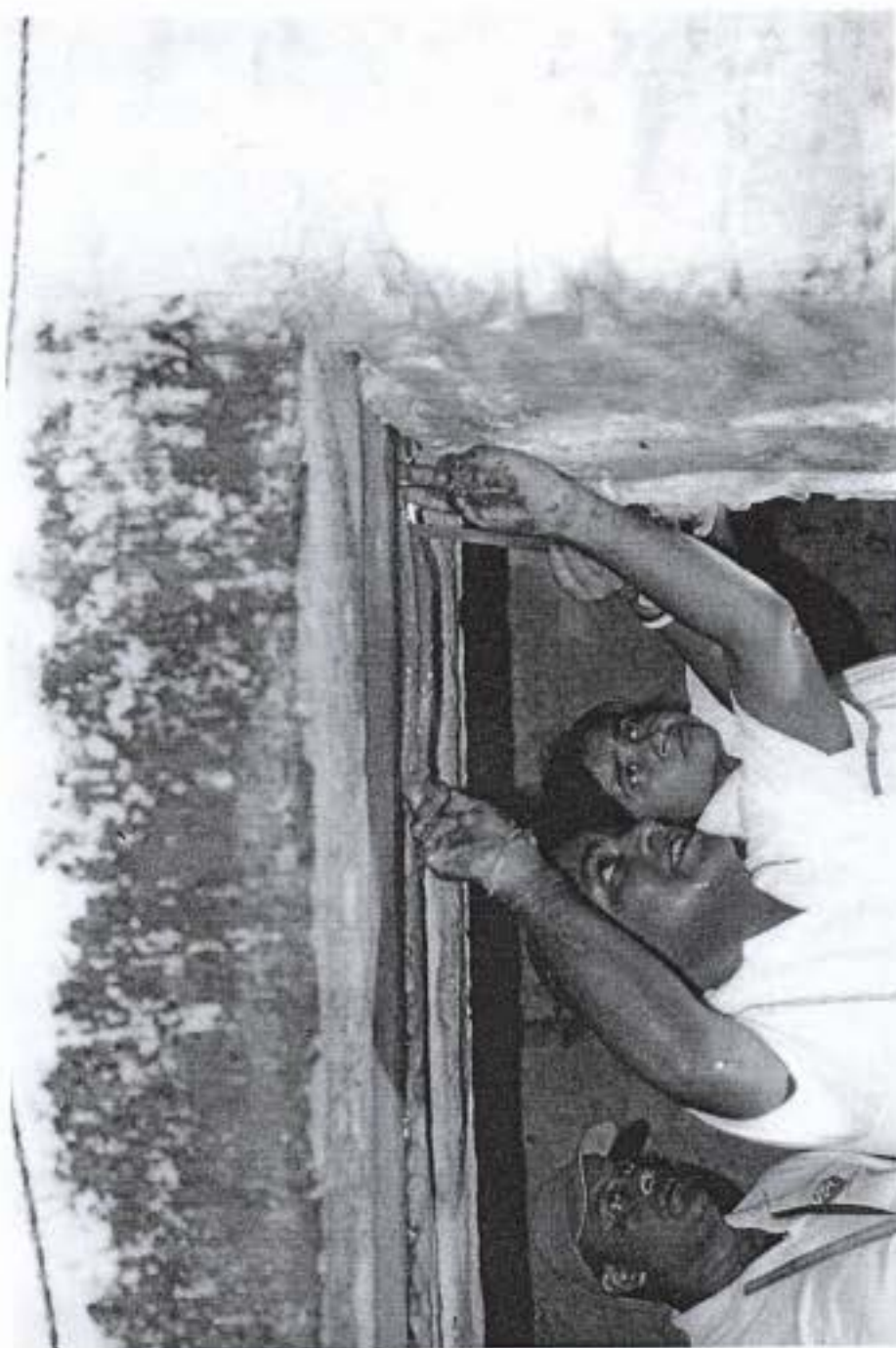
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Cellar N3: View from south



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Cellar N3: Copying inscription

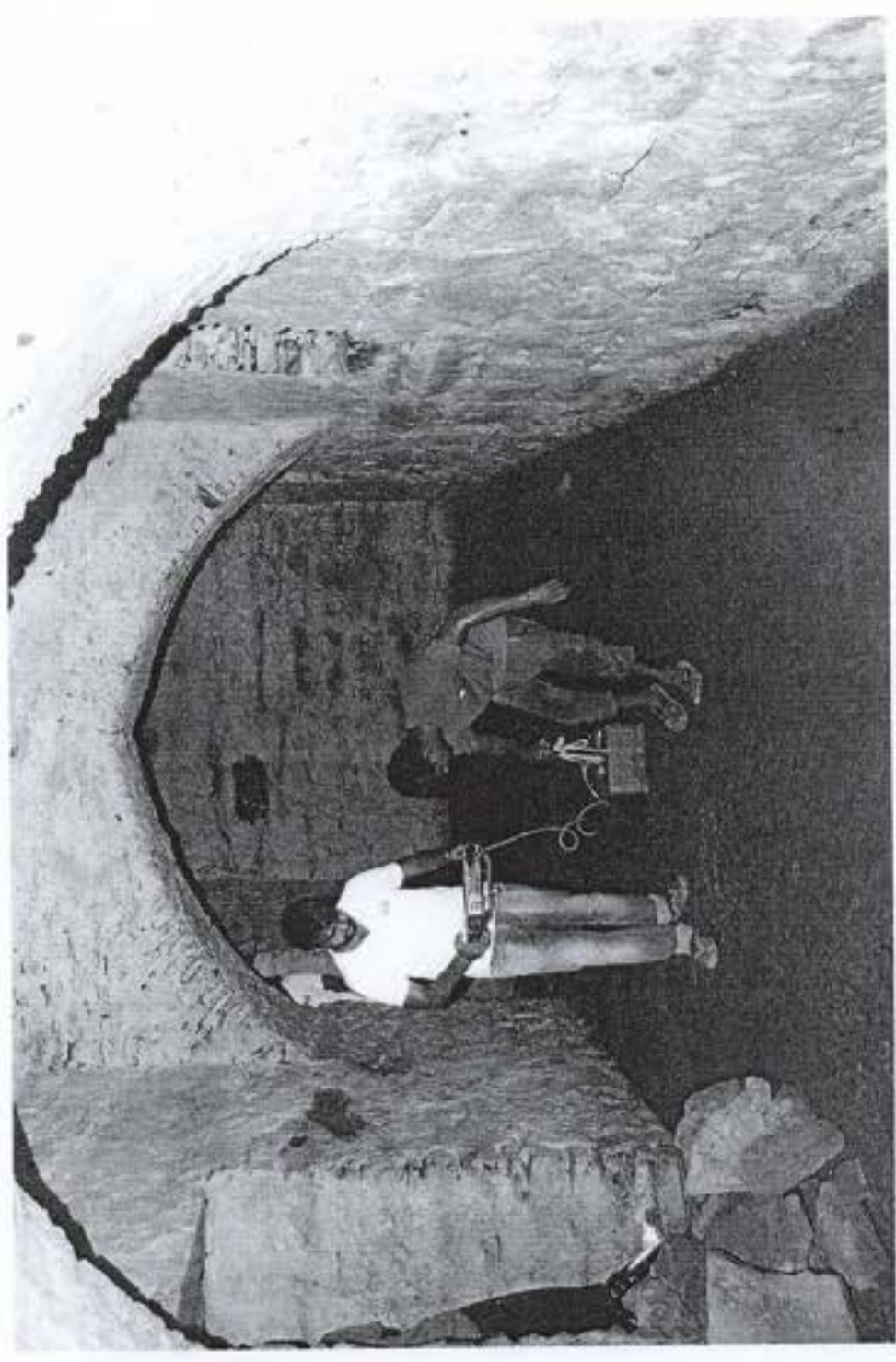




Cellar N3: Copy of inscription

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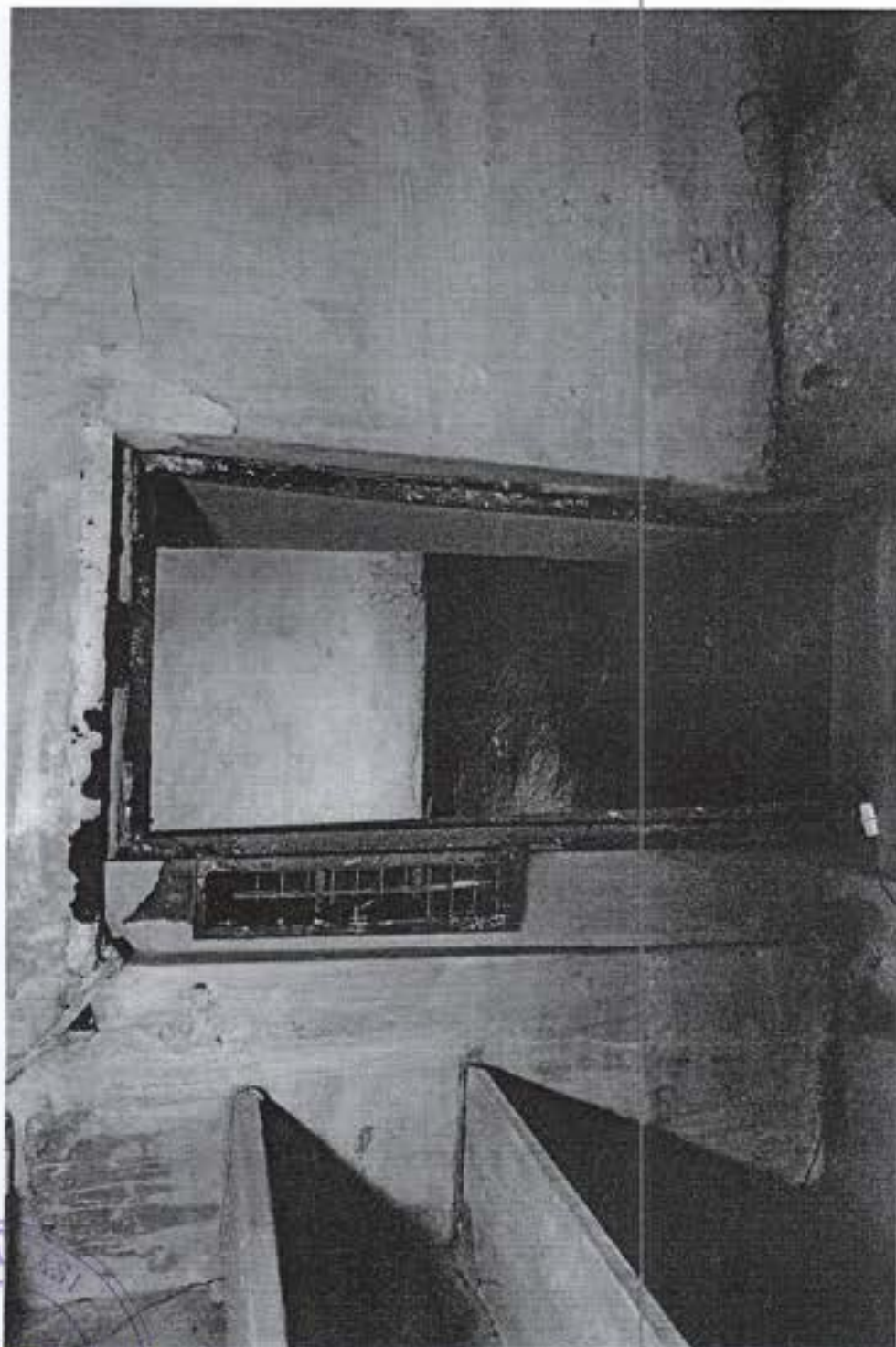


Cellar N3: GPR survey on floor



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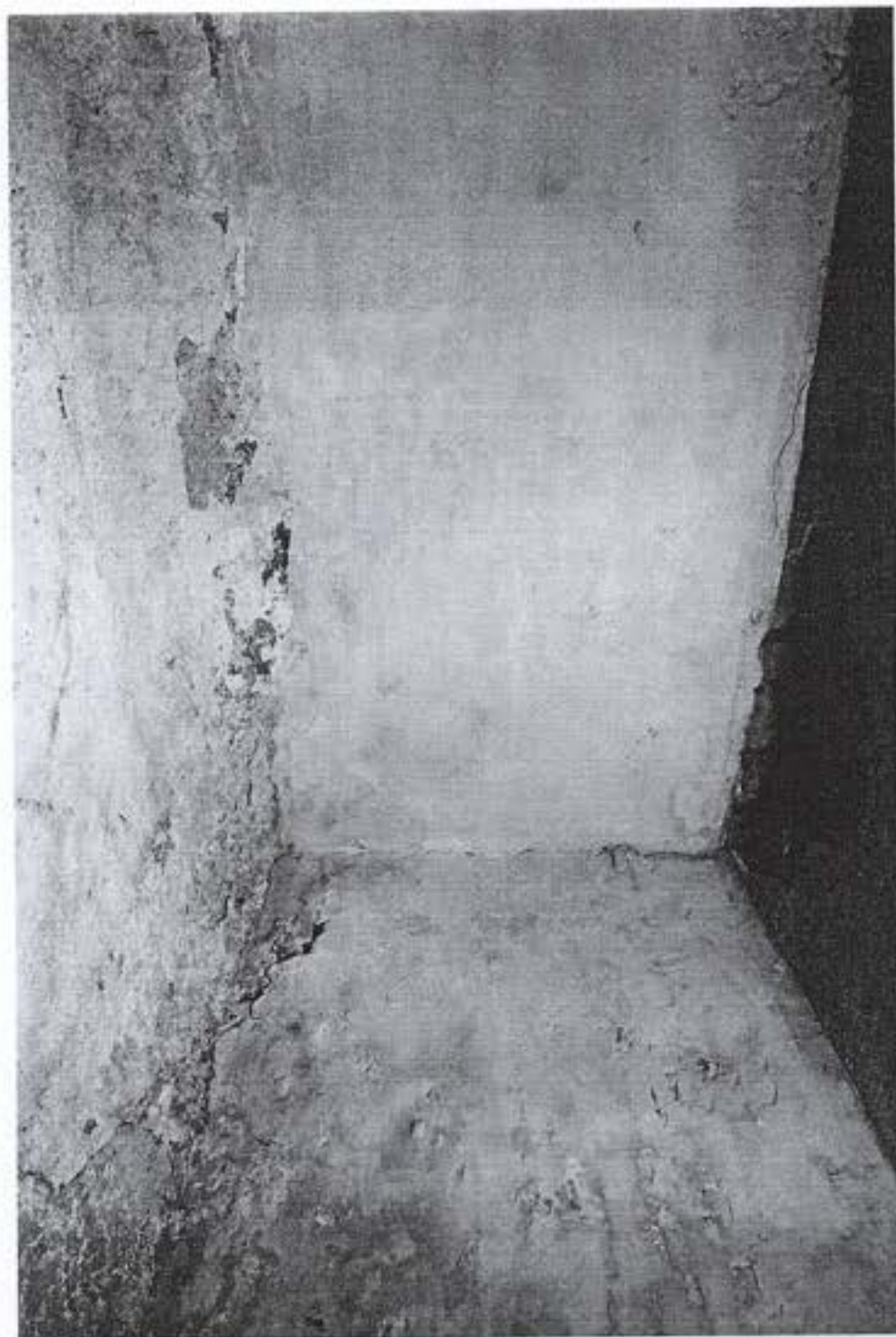


Cellar N4: Entrance from shop



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Cellar N4: Southeast corner



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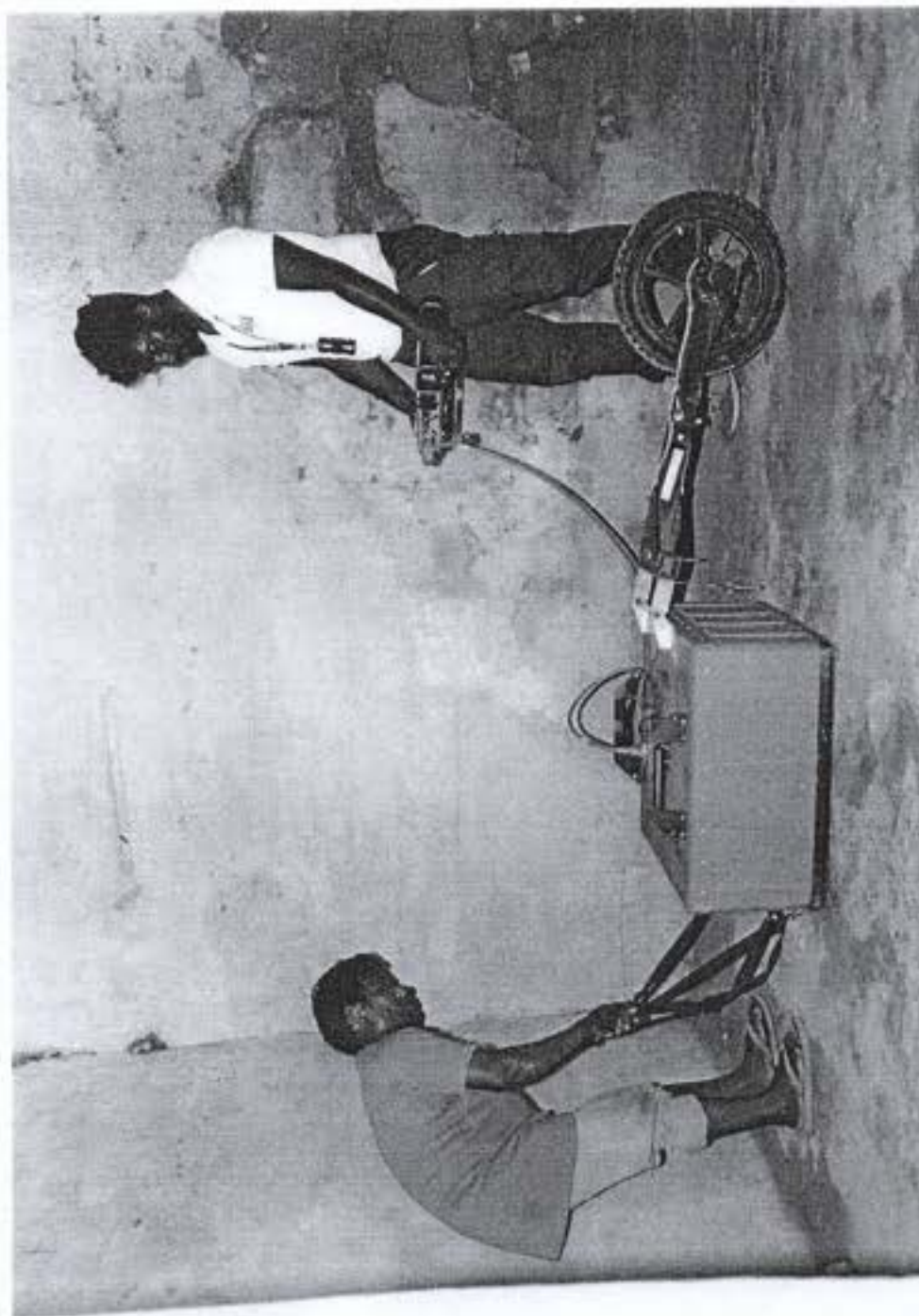
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Cellar N5: Entrance of shop

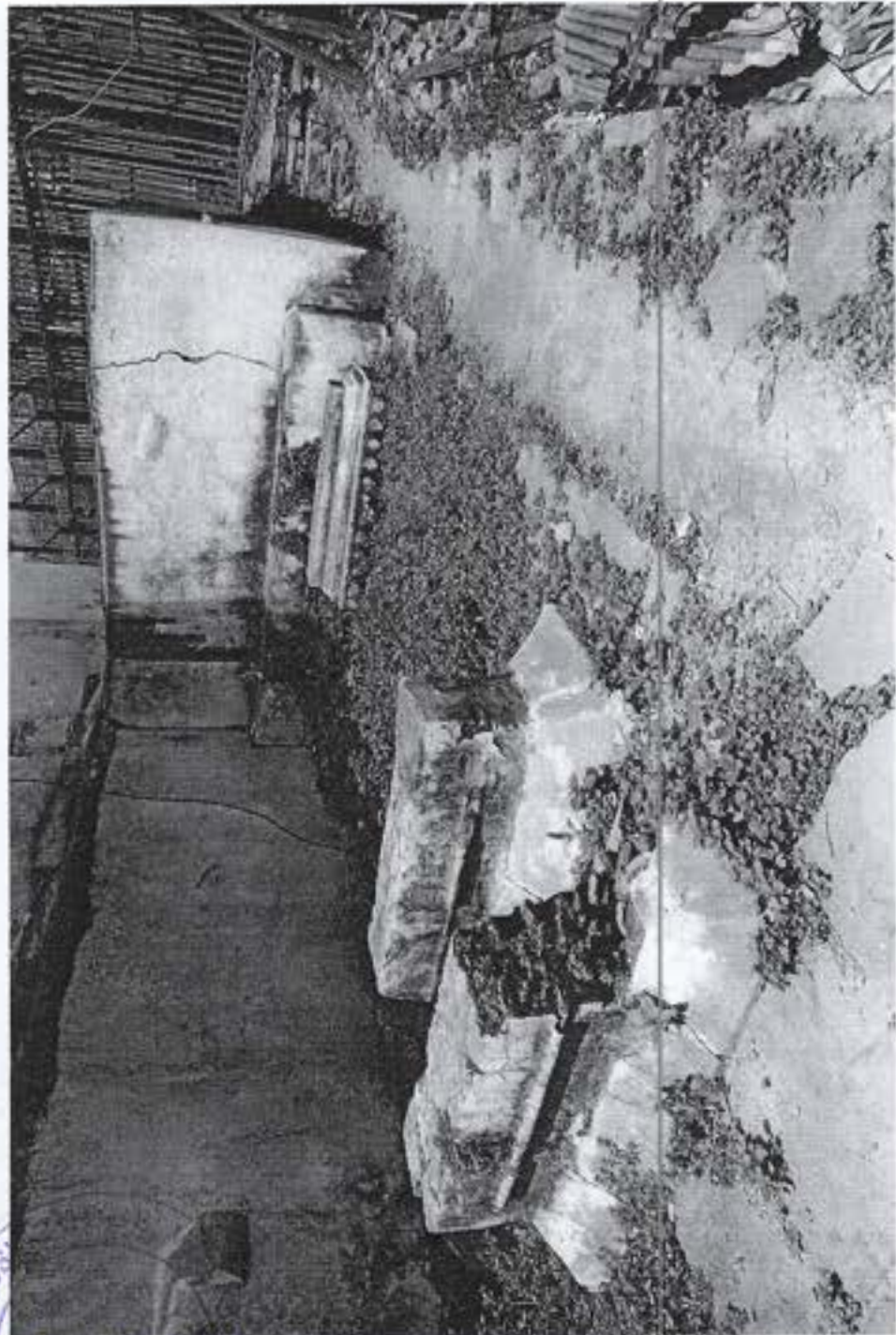


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Cellar N5: GPR survey on floor





North Side: Area near graves, before cleaning

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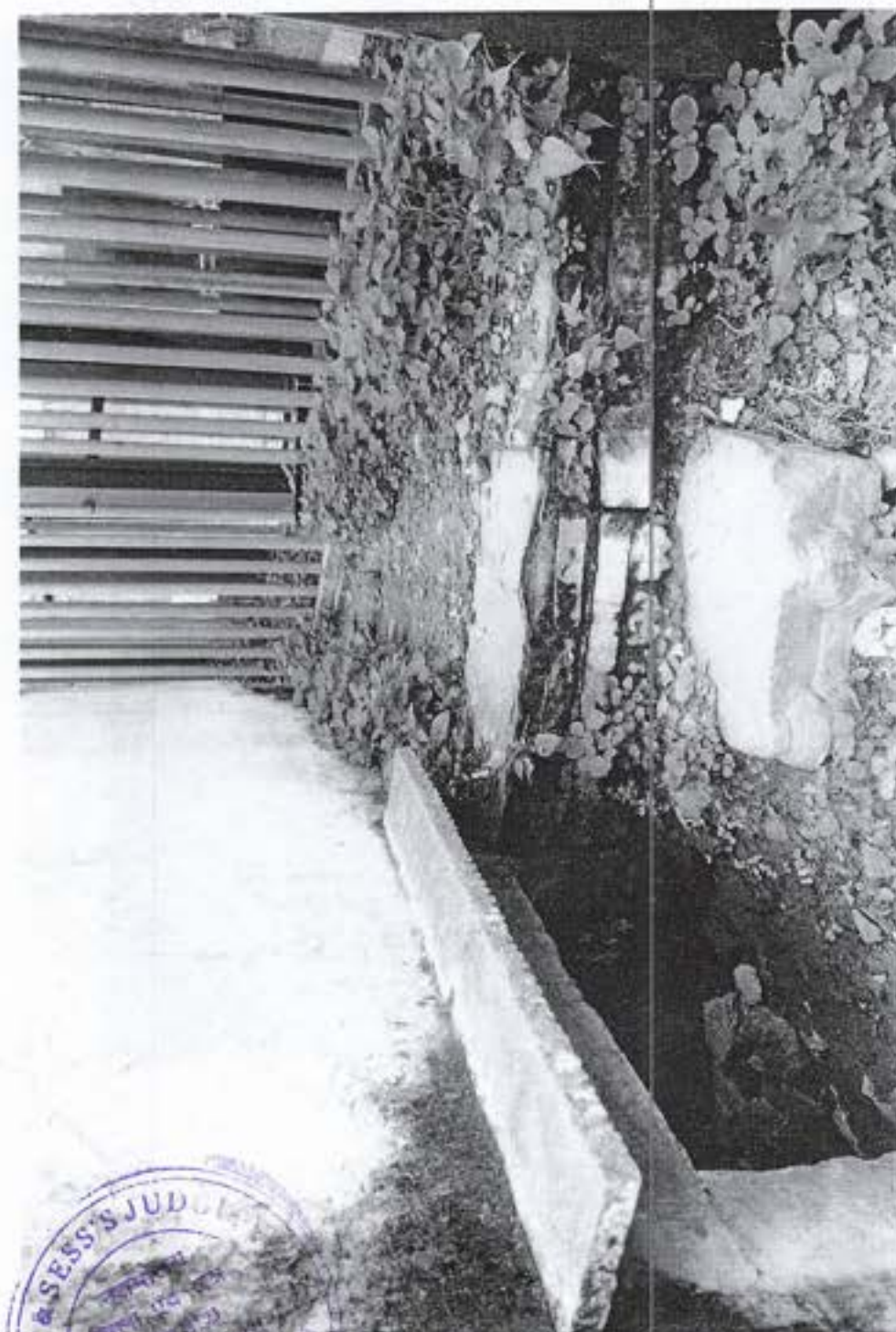
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North Side: Area near graves, after cleaning





Shop 3: Entrance

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Shop 3: Inscriptions on lintel



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East Side: General view



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East Side: Before cleaning





East Side: After cleaning

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South Side: Garbage deposit



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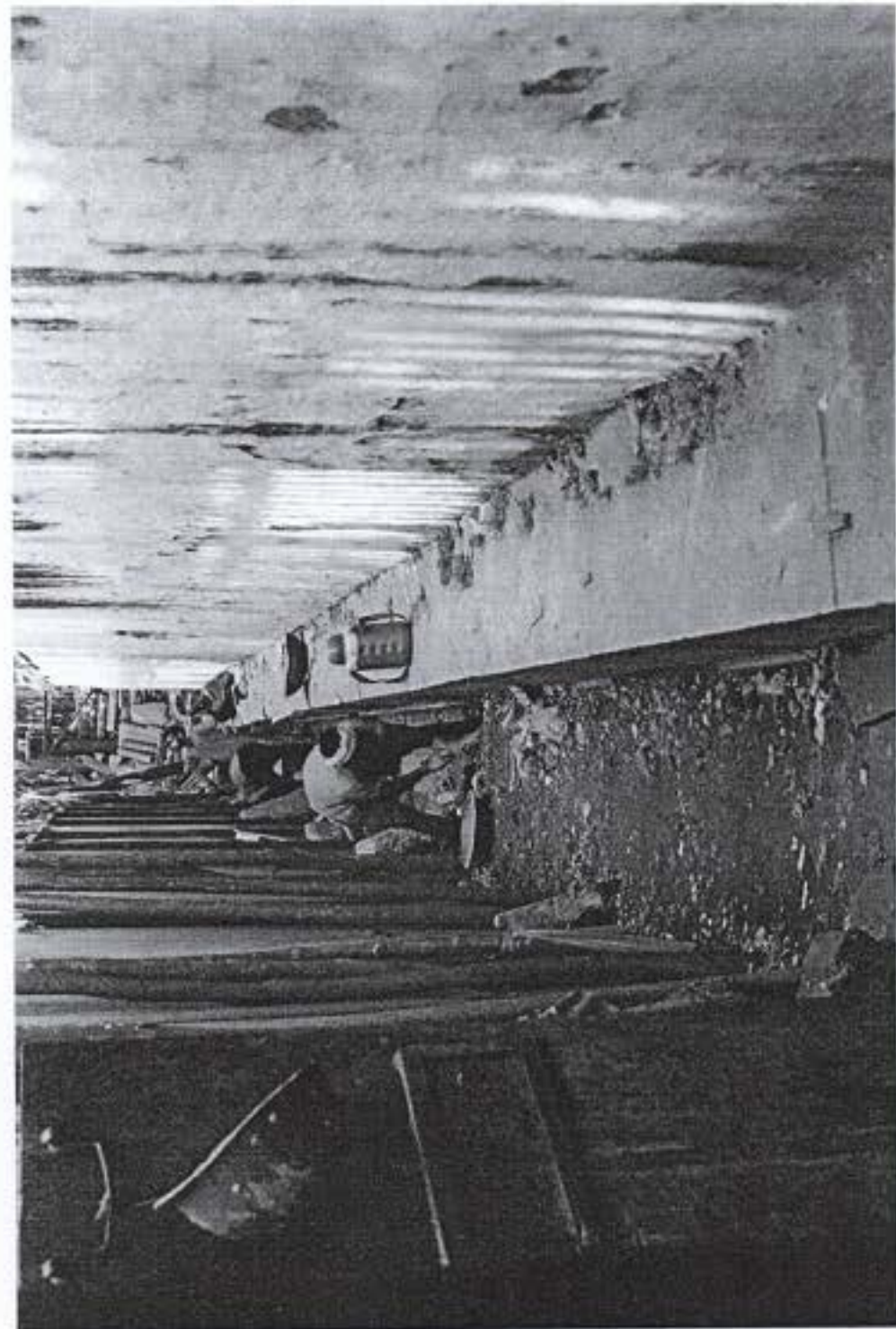
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South Side: Before cleaning

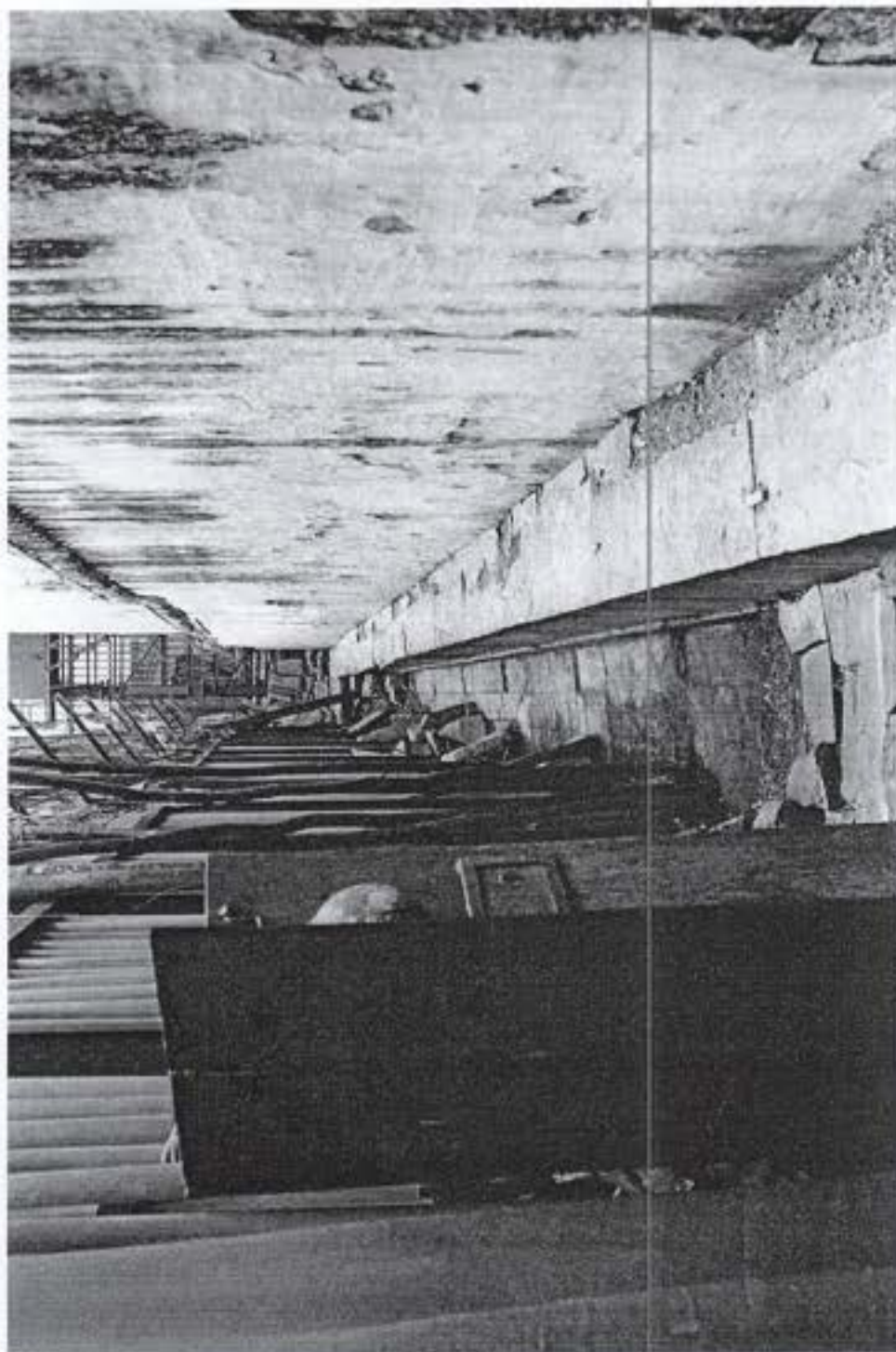


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South Side: Garbage removal





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South Side: After cleaning



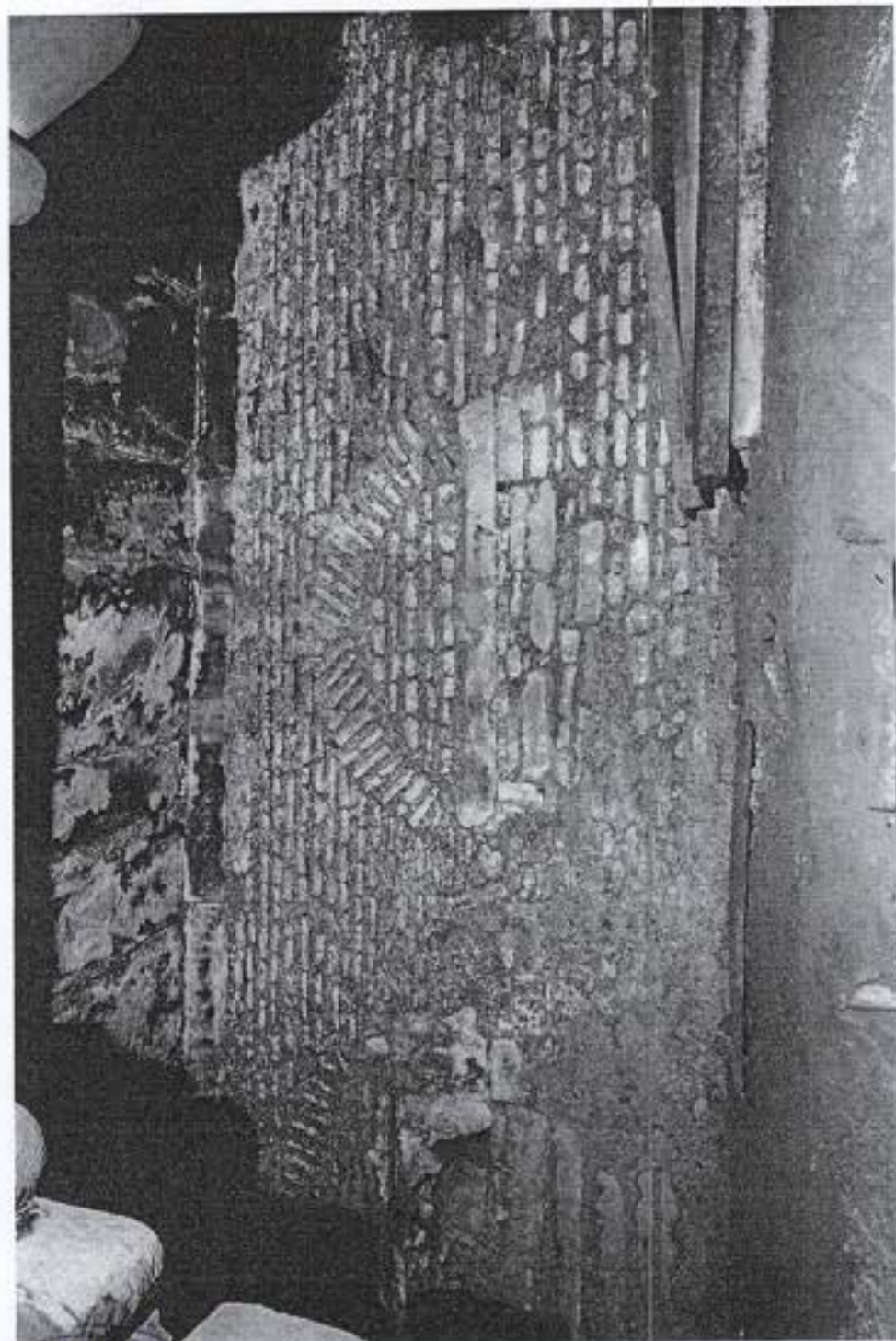
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Cellar S1: Blocked entrances in west wall





Cellar S1: Blocked entrances, 1 and 2

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Cellar S1: Blocked entrances, 2, 3 and 4



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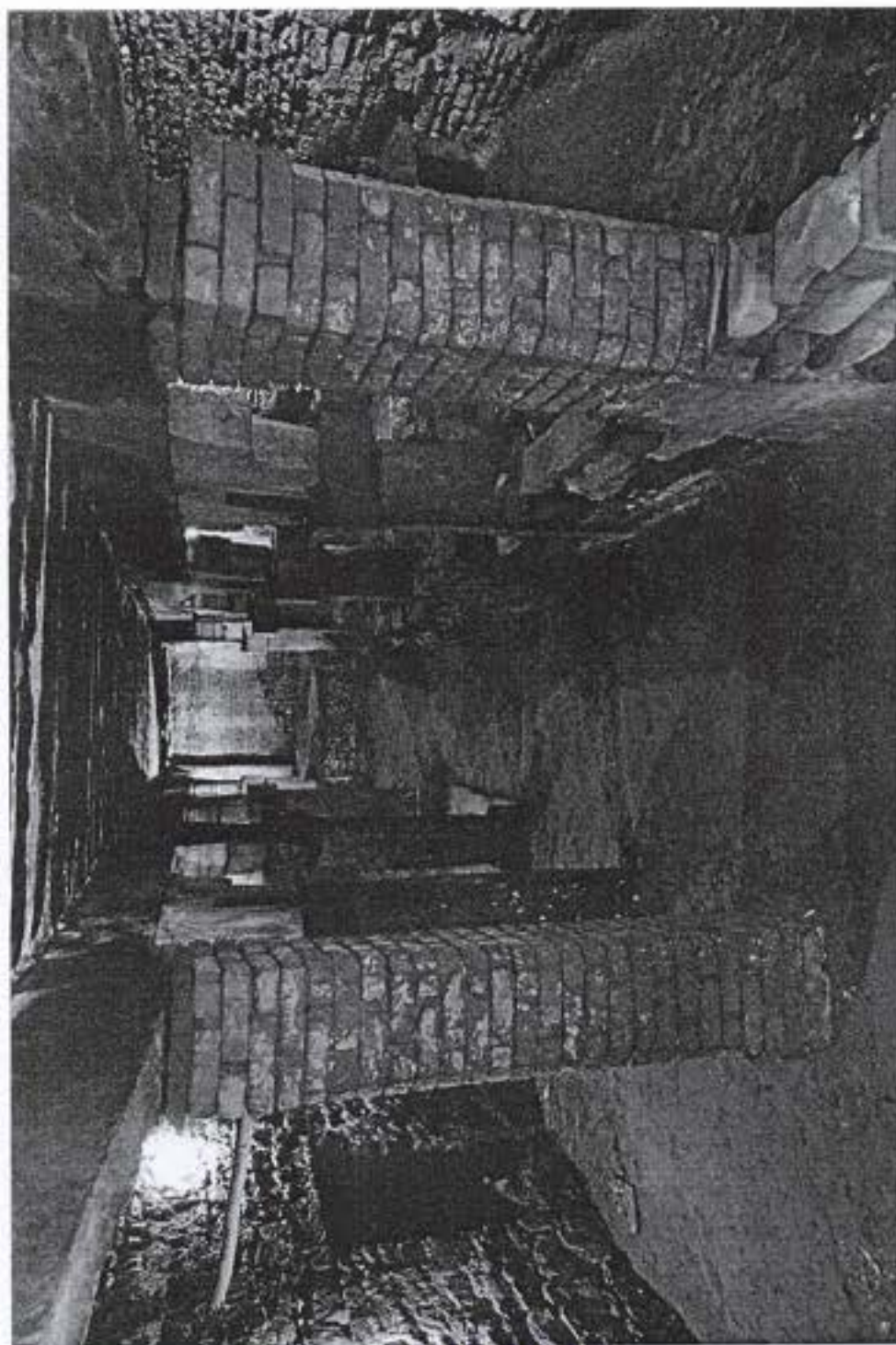


Cellar S2: Dumped material, before cleaning



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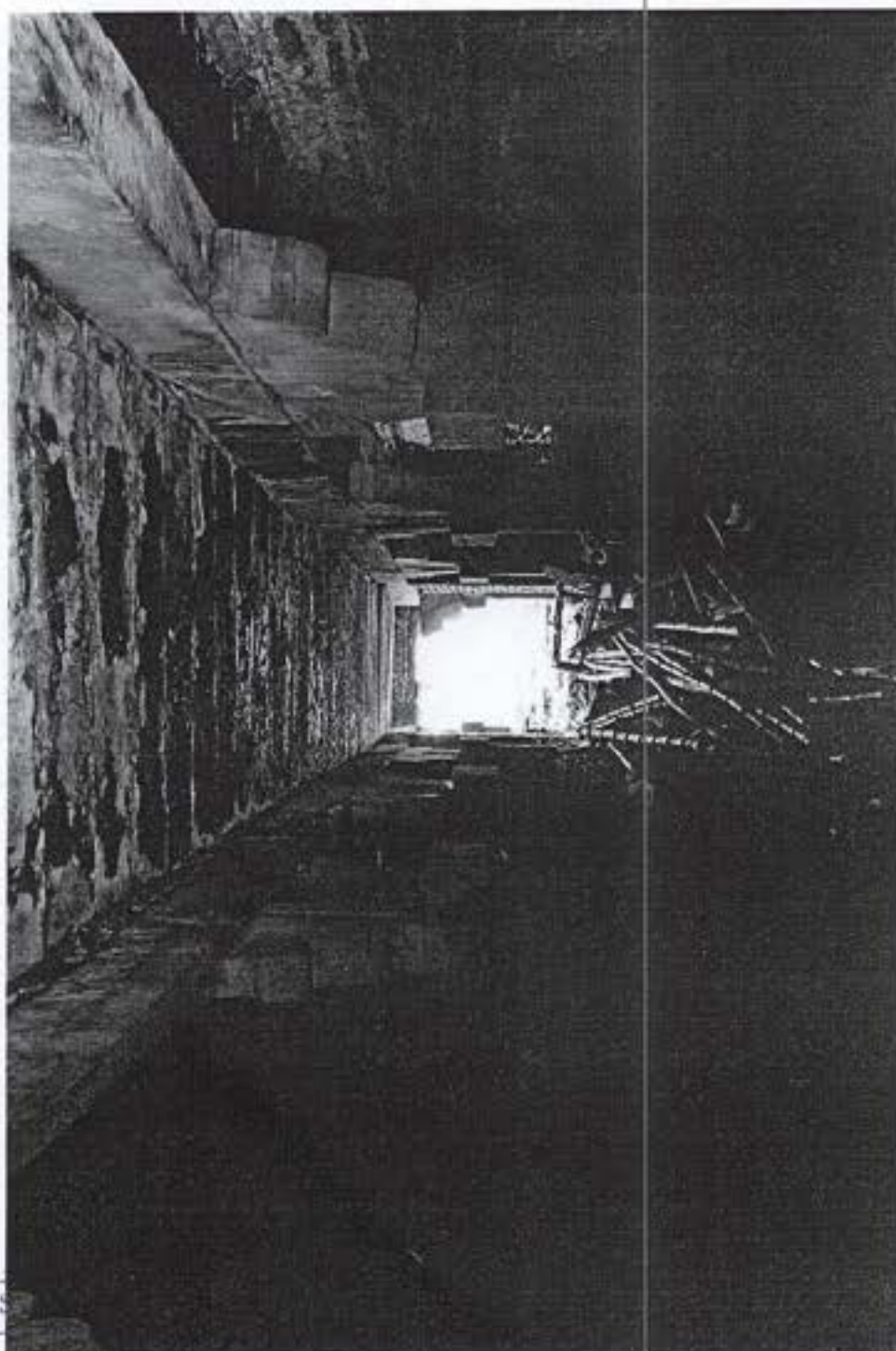


Cellar S2: After cleaning



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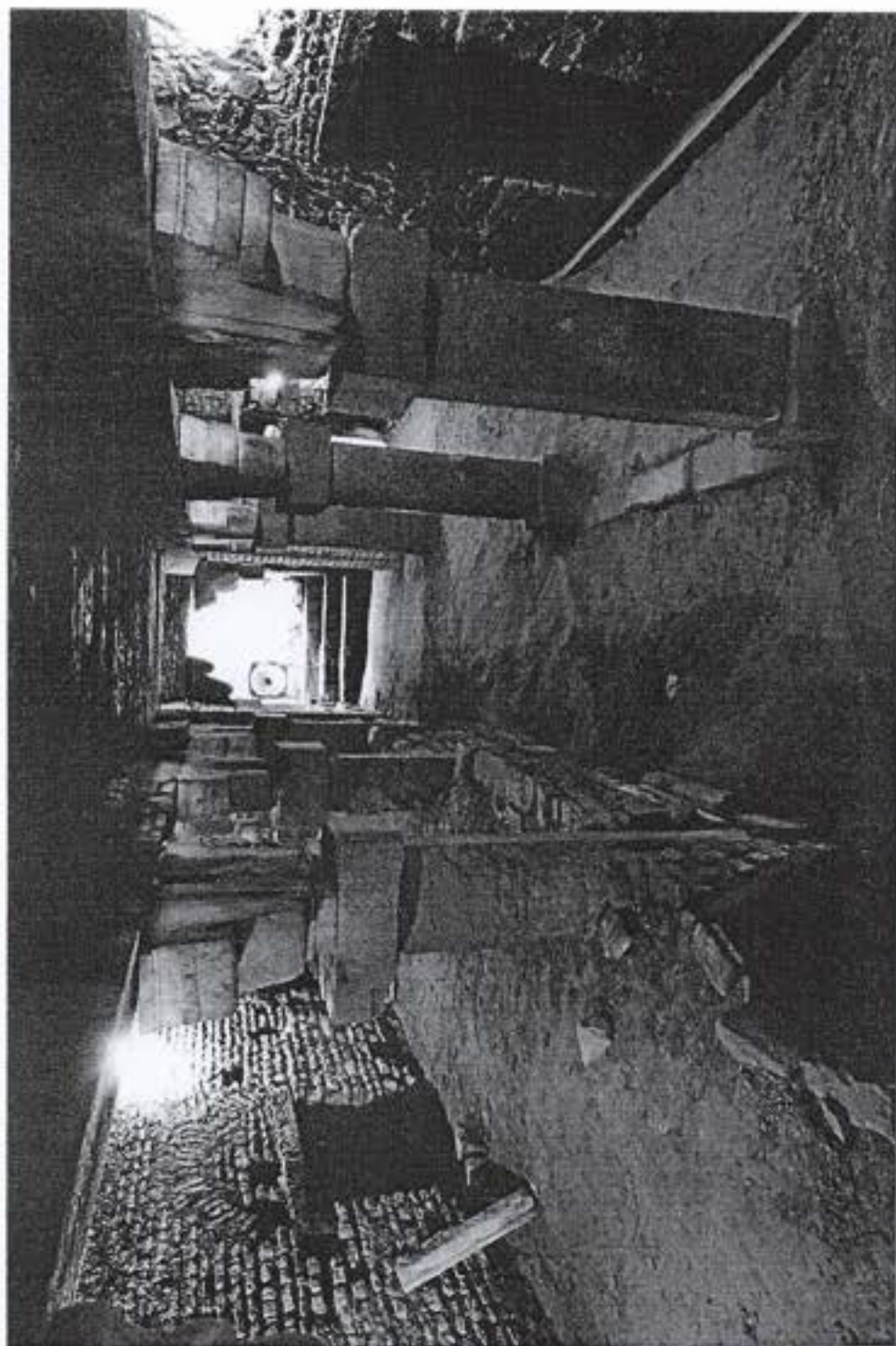


Cellar S2: Before cleaning

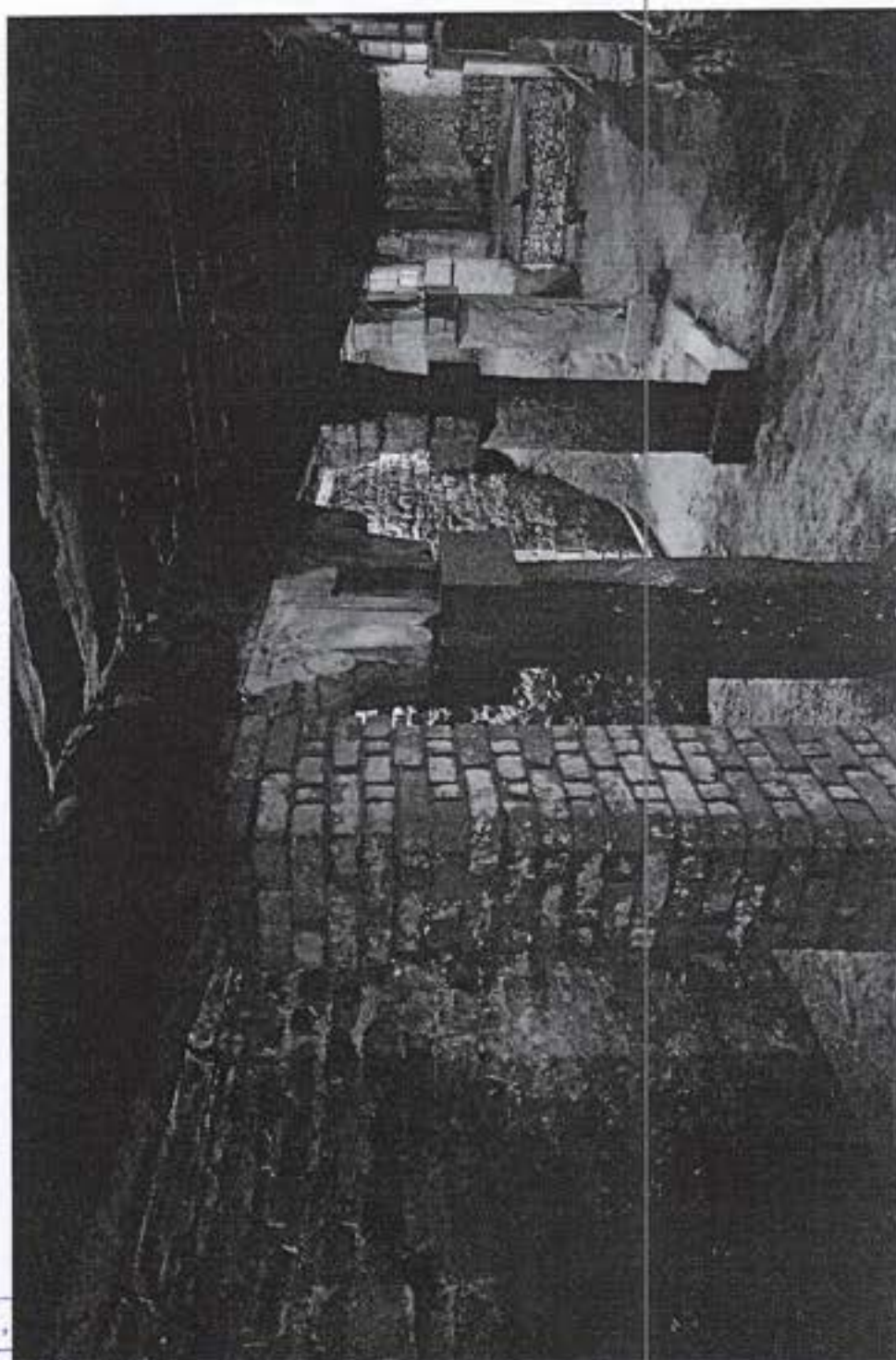


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Cellar S2: Floor level after cleaning



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Cellar S2: Northern wall and damaged ceiling



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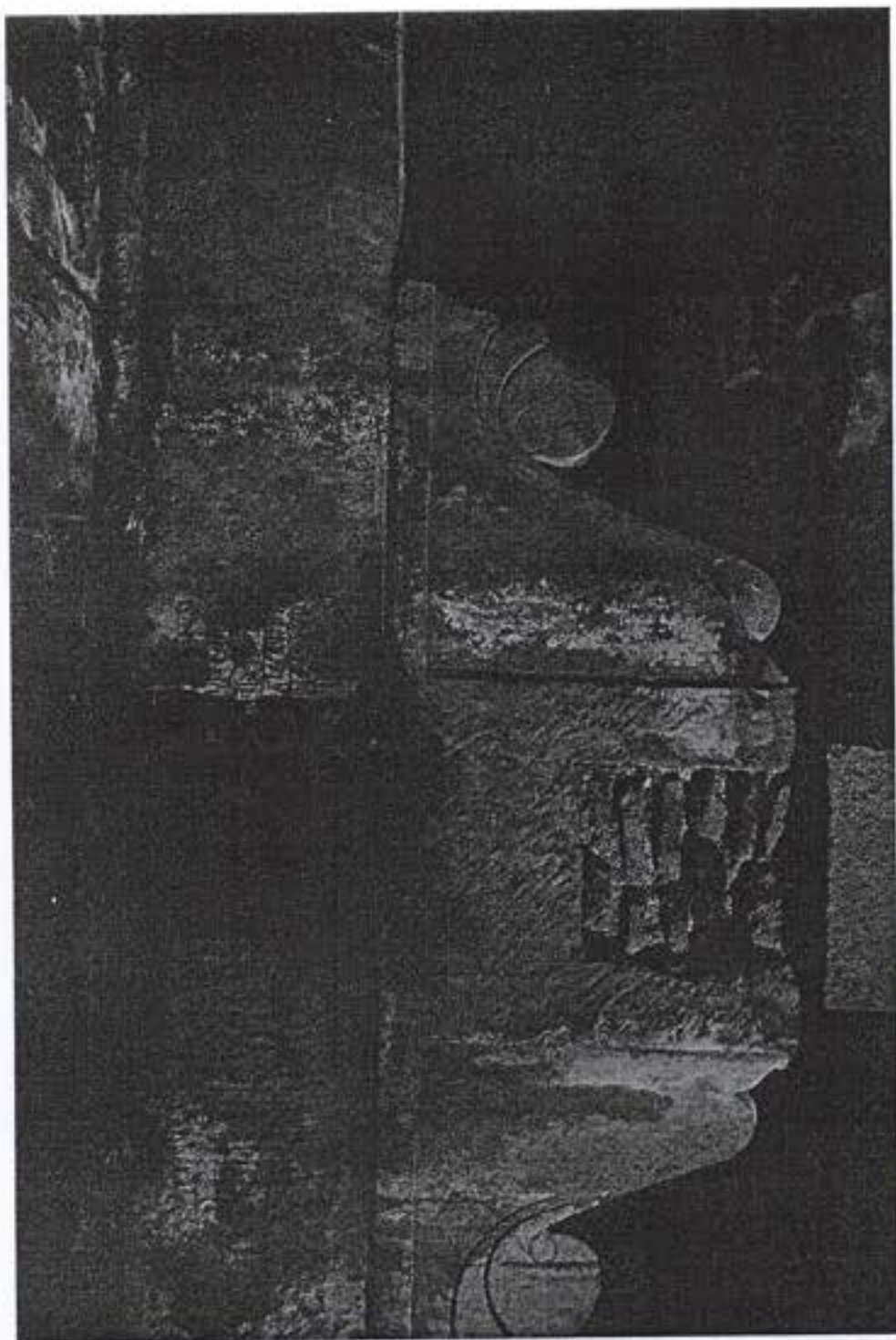


Cellar S2: Damaged ceiling



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Cellar S2: Inscription on beam





Cellar S2: Copying inscription

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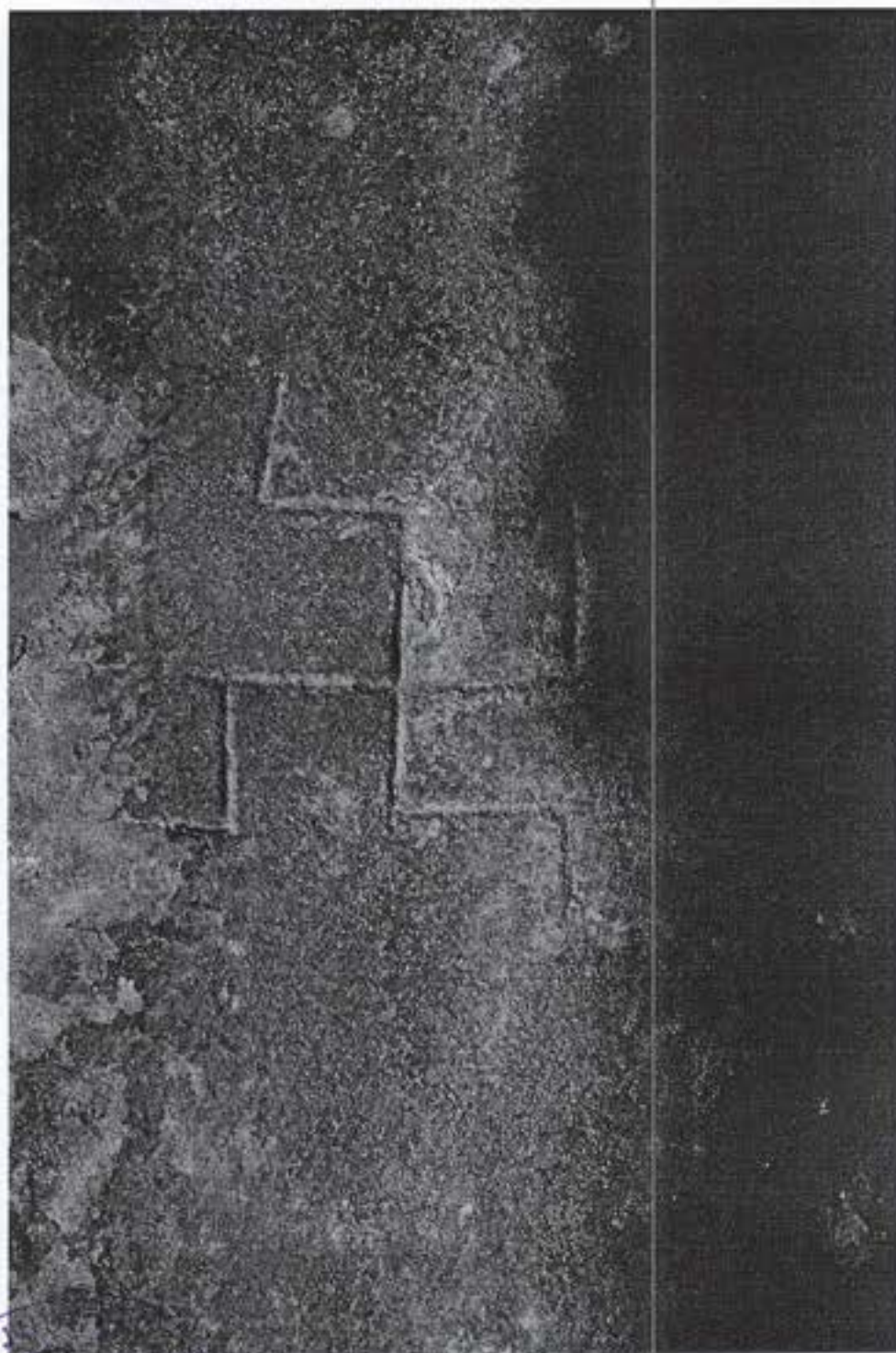


Cellar S2: Engraving on pillar bracket



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Cellar S2: Swastik on pillar



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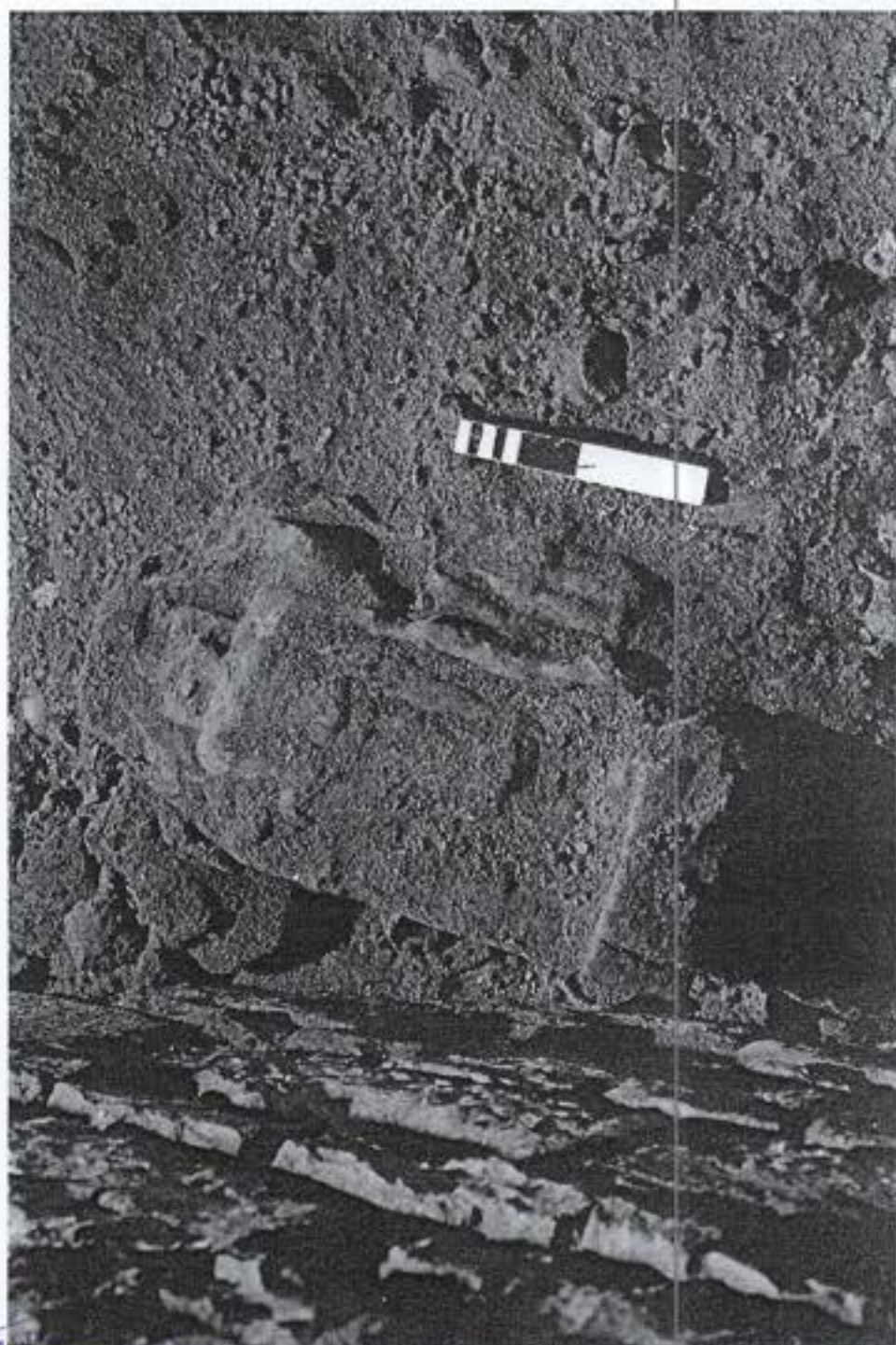


Cellar S2: GPR survey



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Cellar S2: Exposed sculpture



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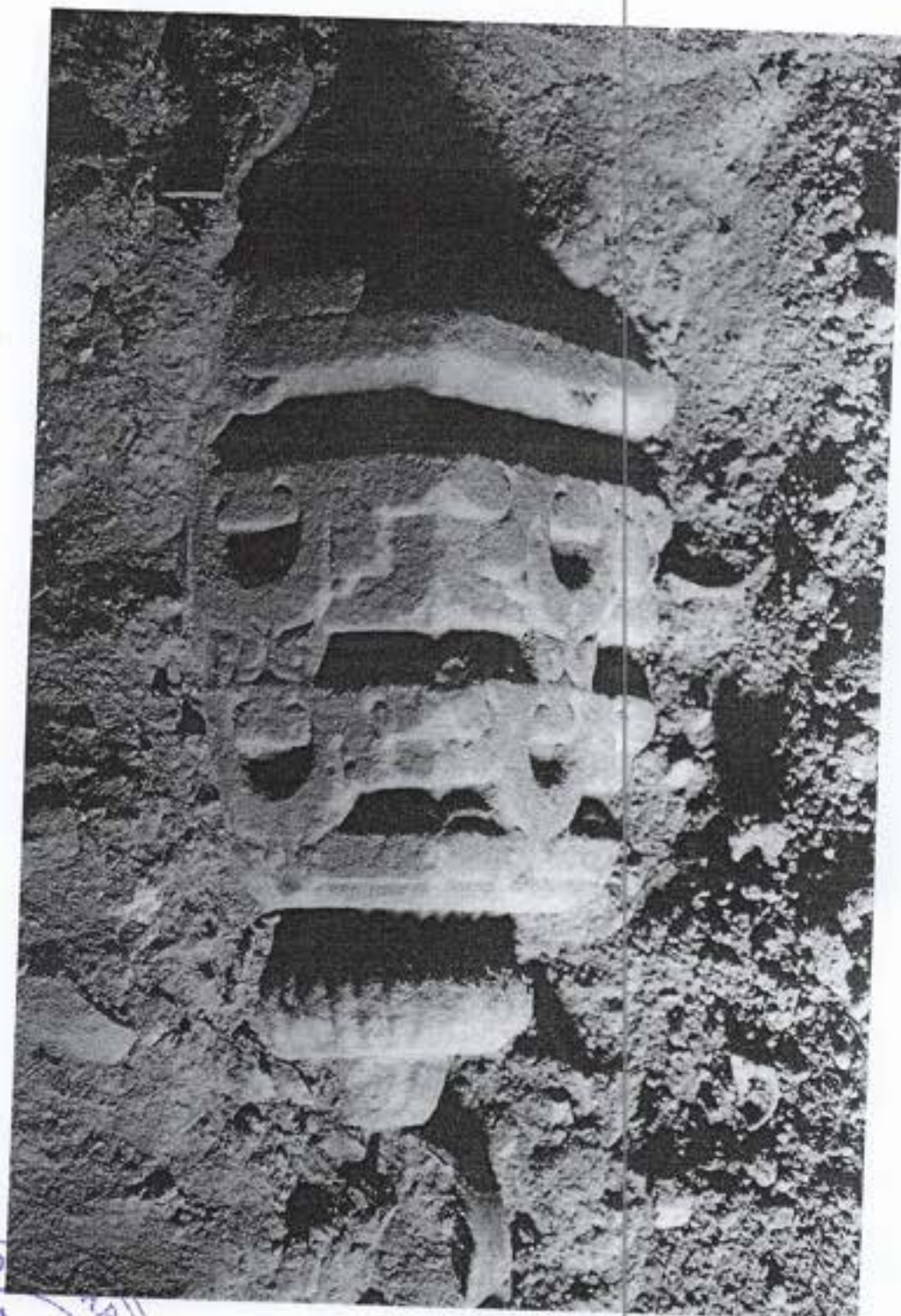


Cellar S2: Exposed sculpture



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Cellar S2: Exposed sculpture



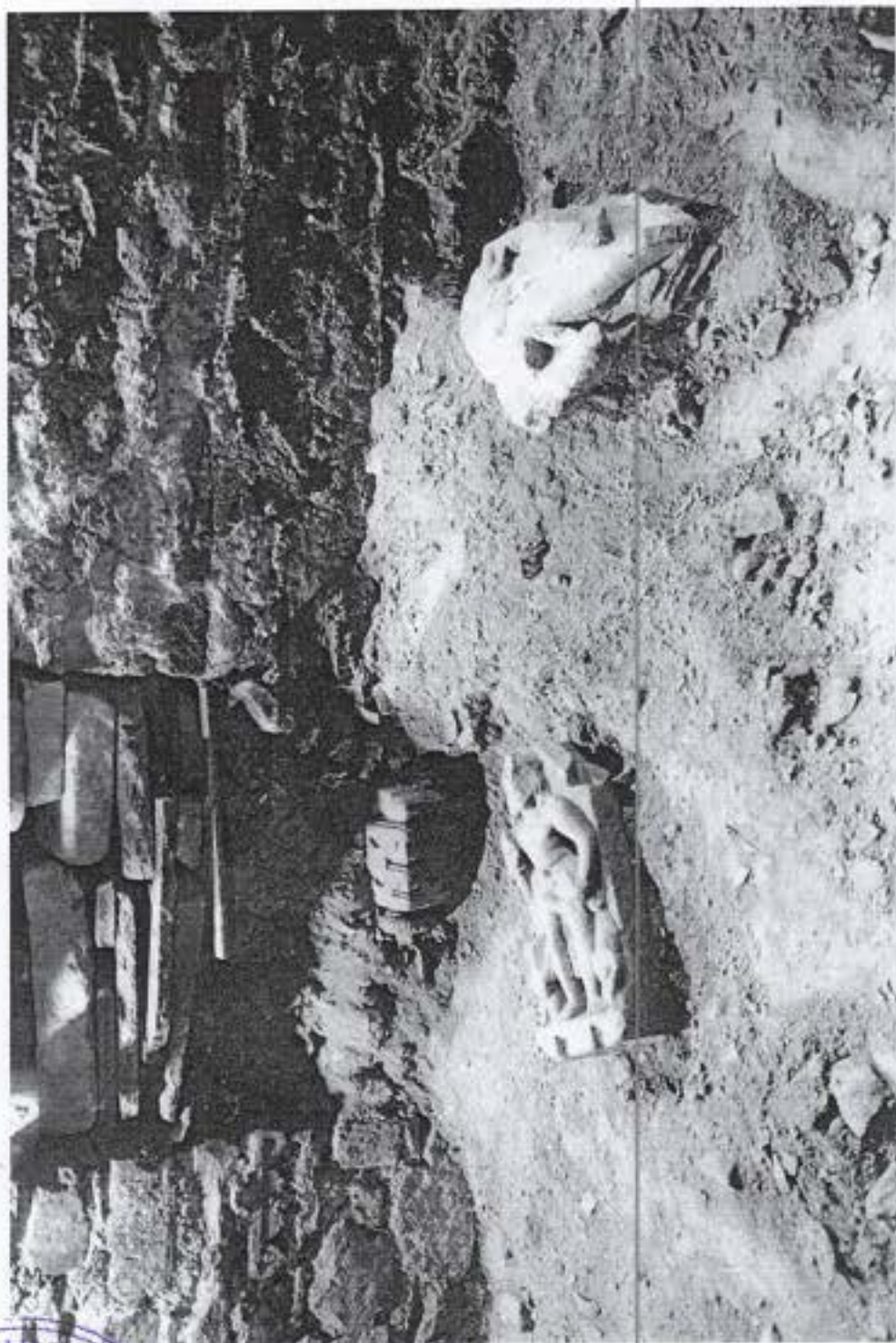
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Cellar S2: Exposed sculpture



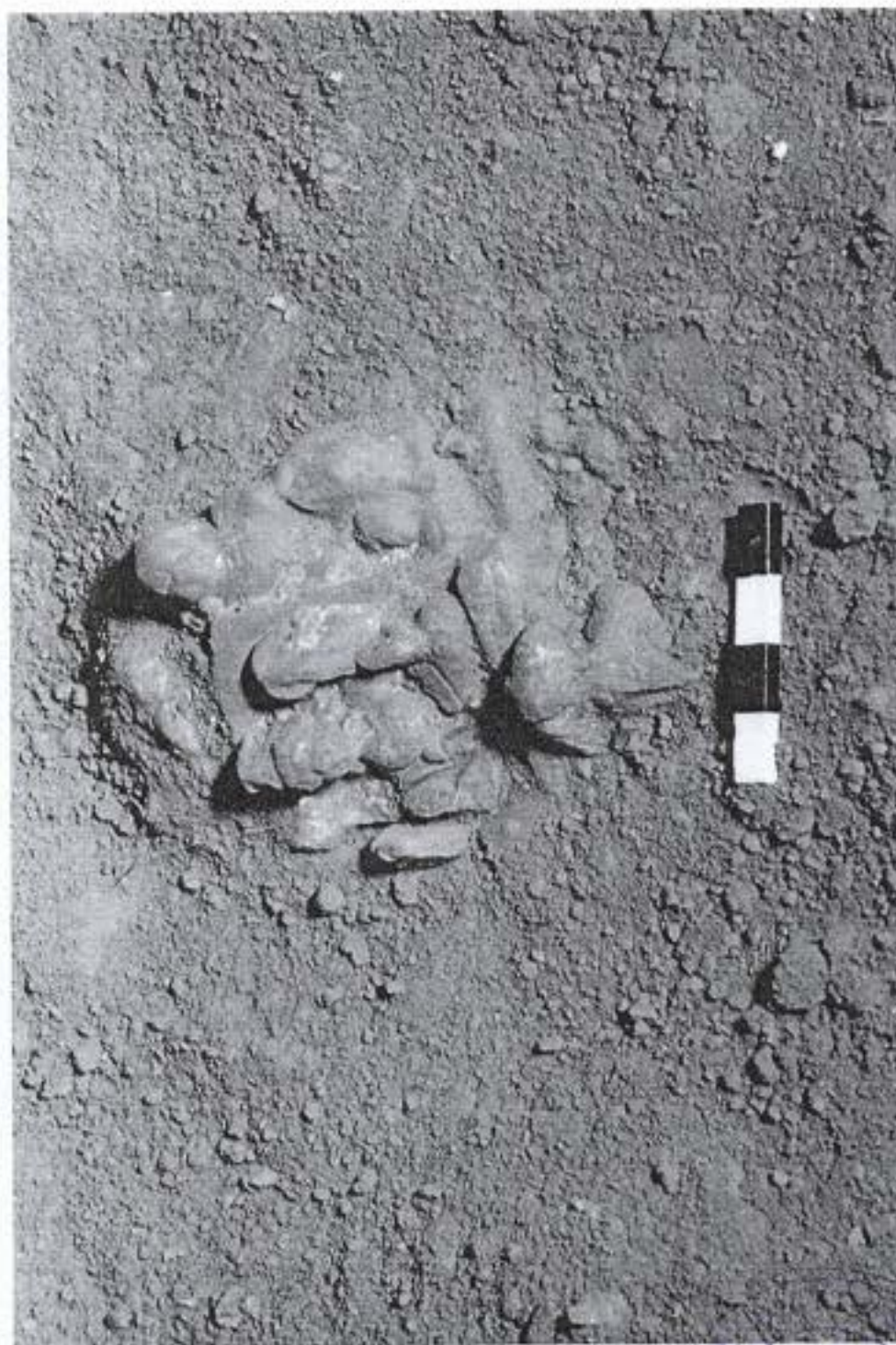


Cellar S2: Exposed sculptures

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Cellar S2: Exposed sculpture



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Cellar S2: Exposed coins



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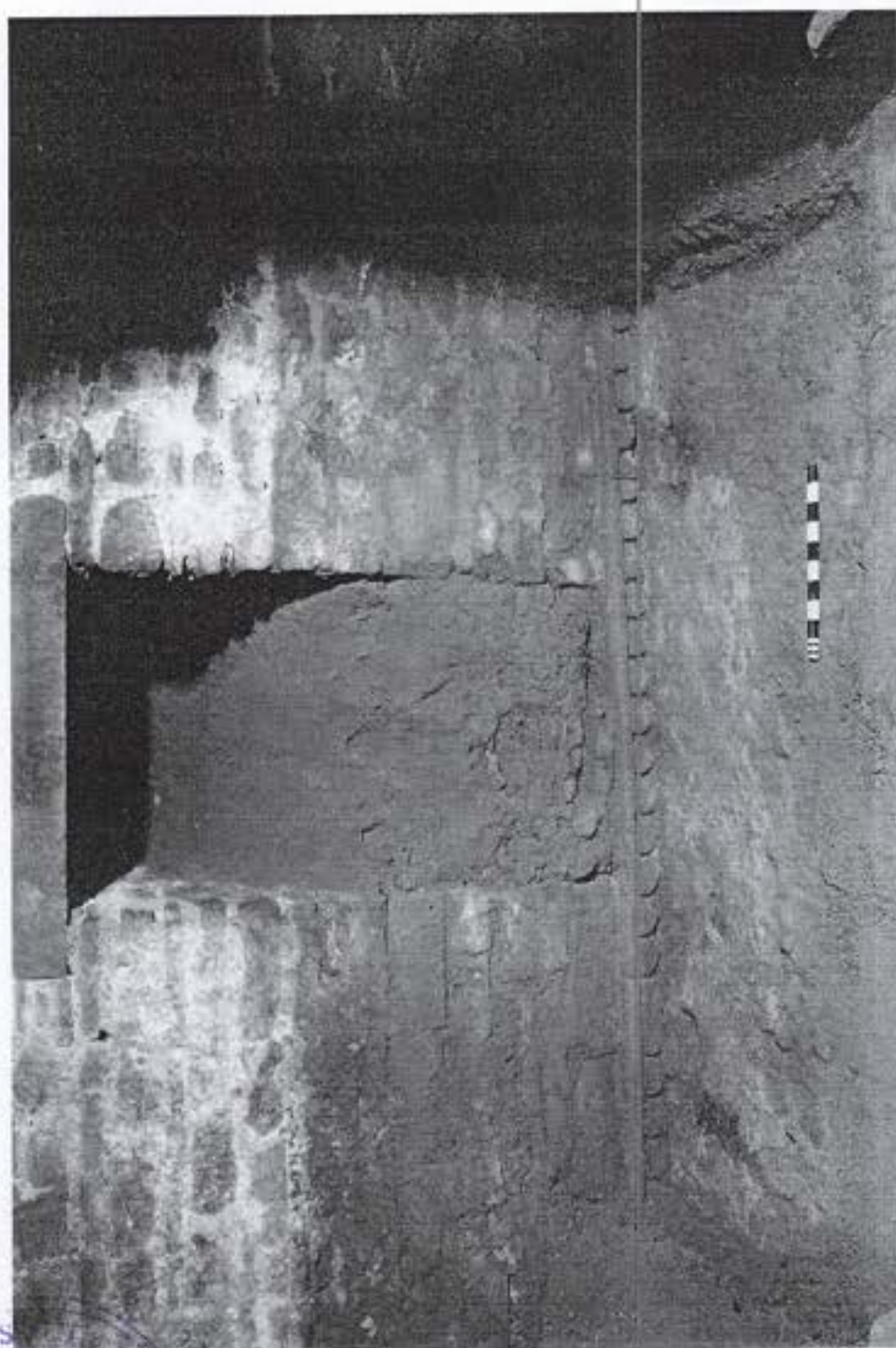


Cellar S3: Fourth entrance



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Cellar S3: Third entrance



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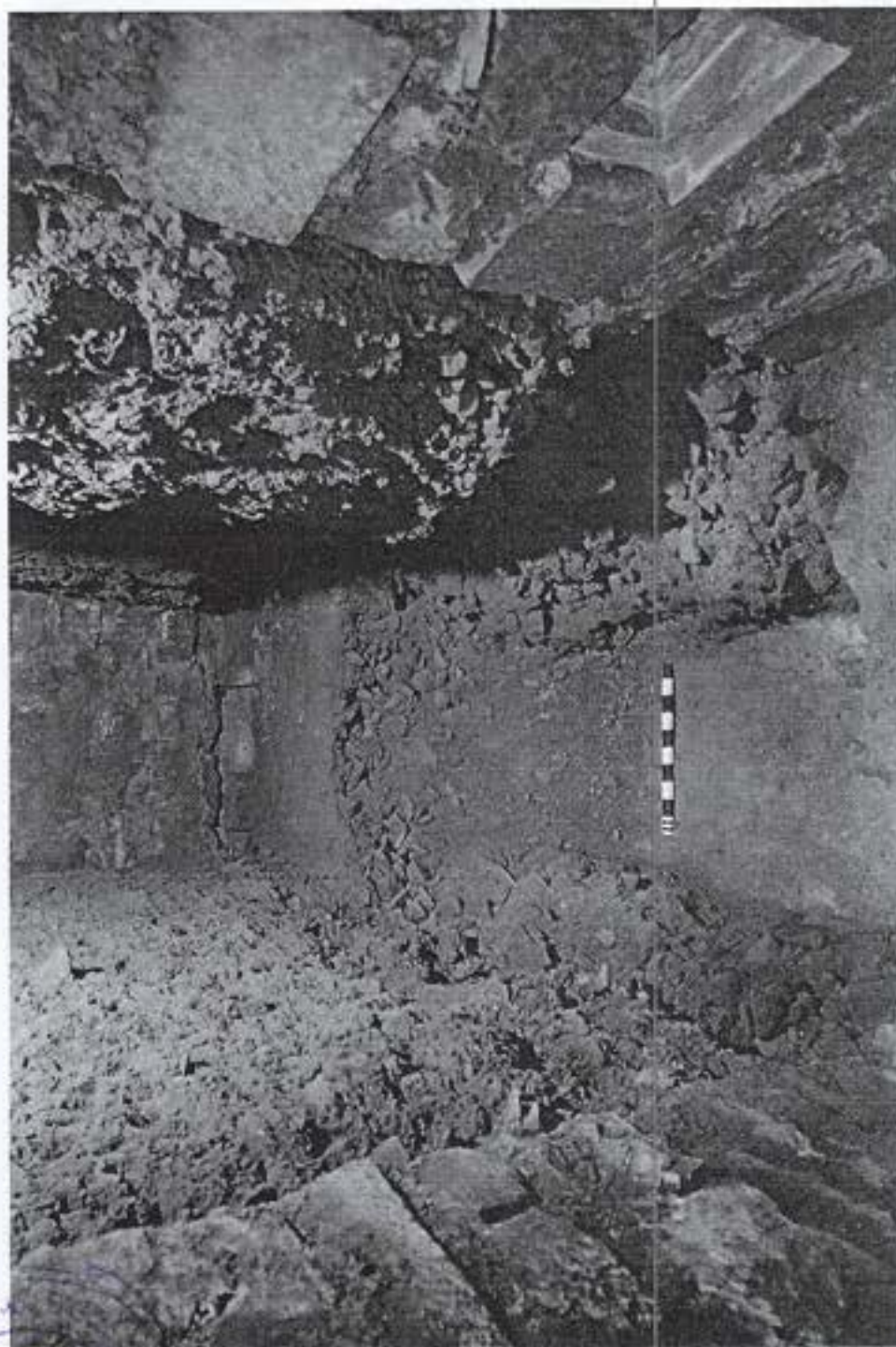


Cellar S3: After removal of debris



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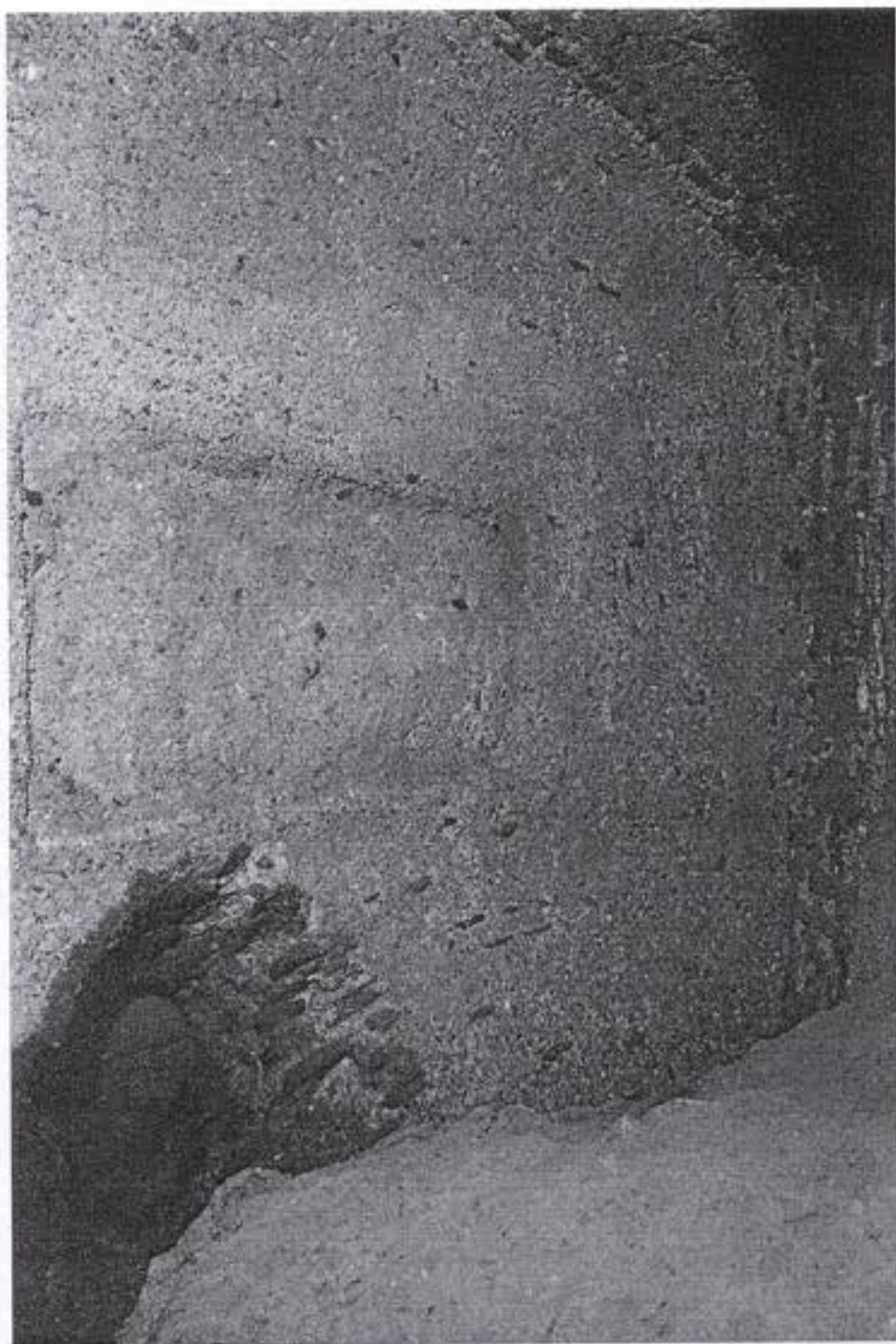


Cellar S3: Exposed floor level



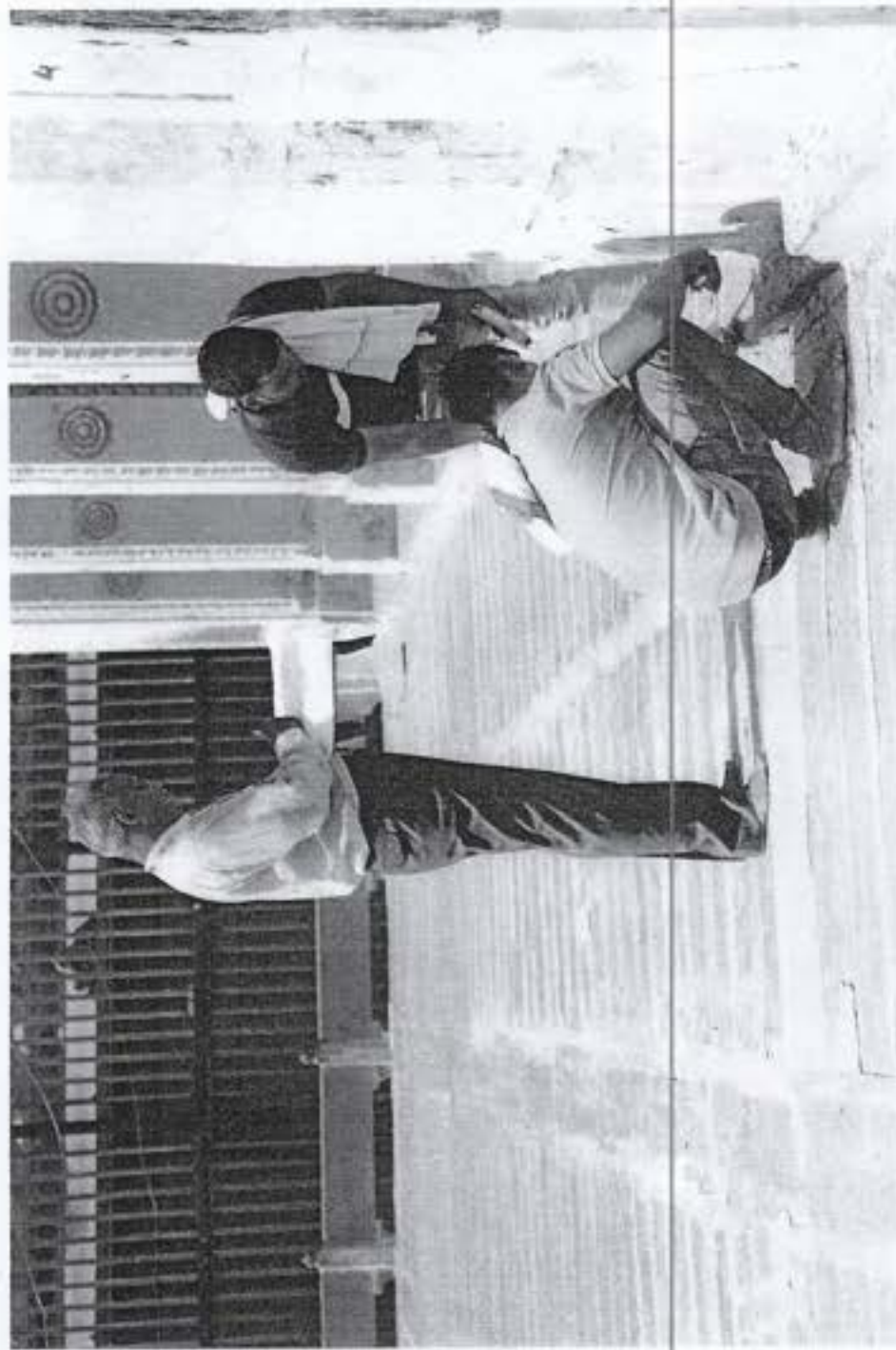
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Cellar S3: Hole in ceiling

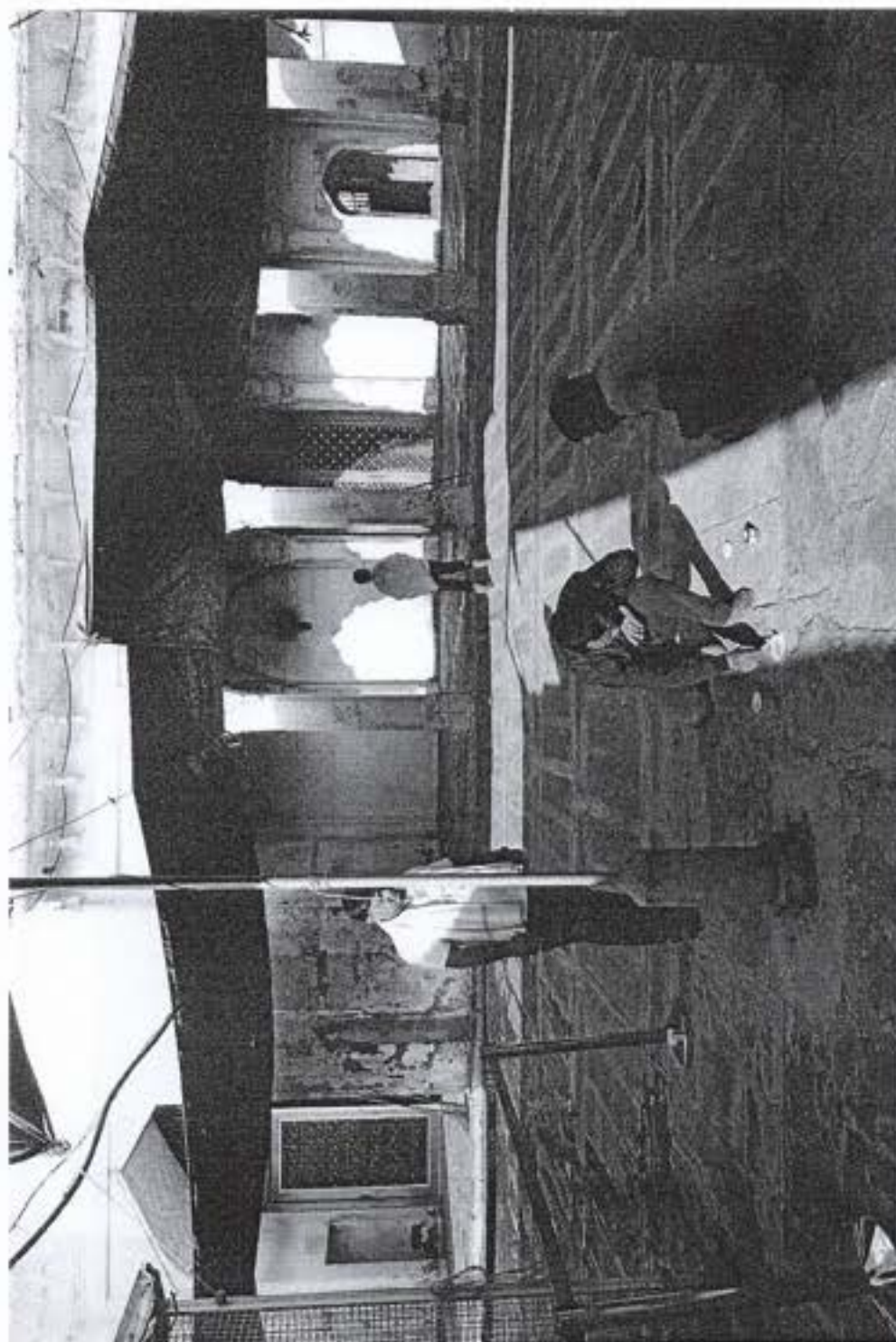




Platform: Recording and measurement

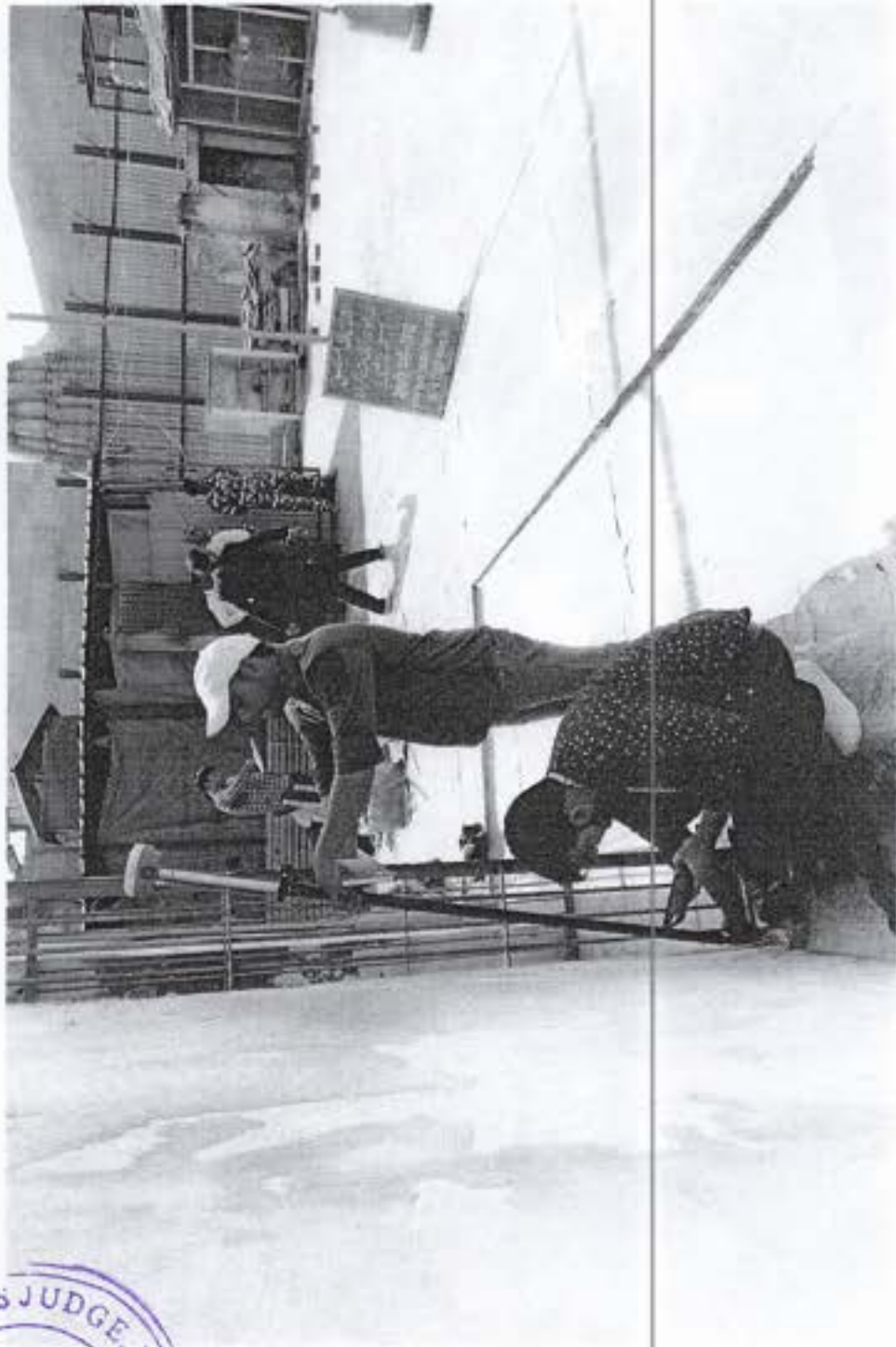
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Platform: Marking of points





Platform: Measurement through DGPS

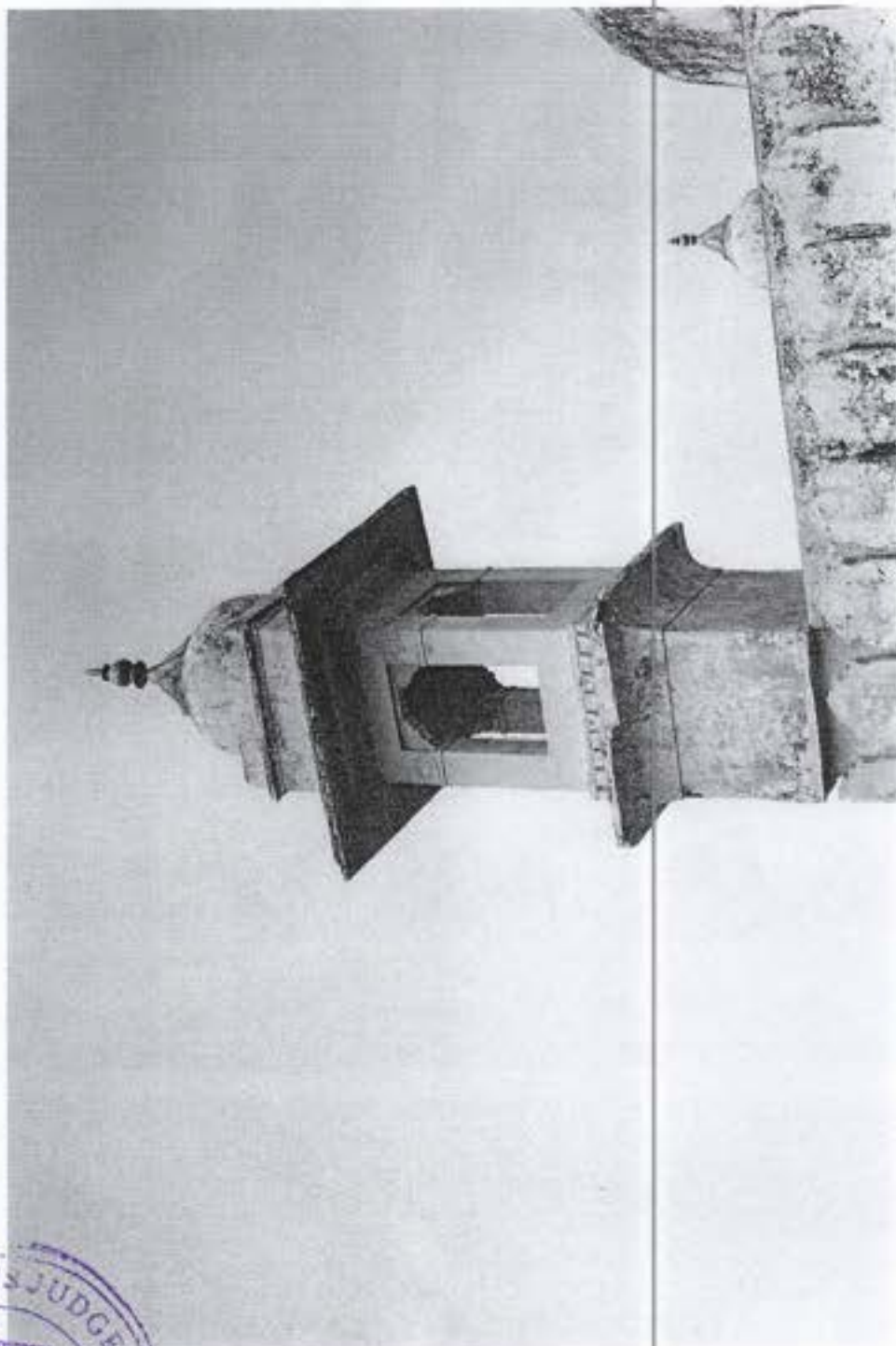
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686



Existing Structure: Façade



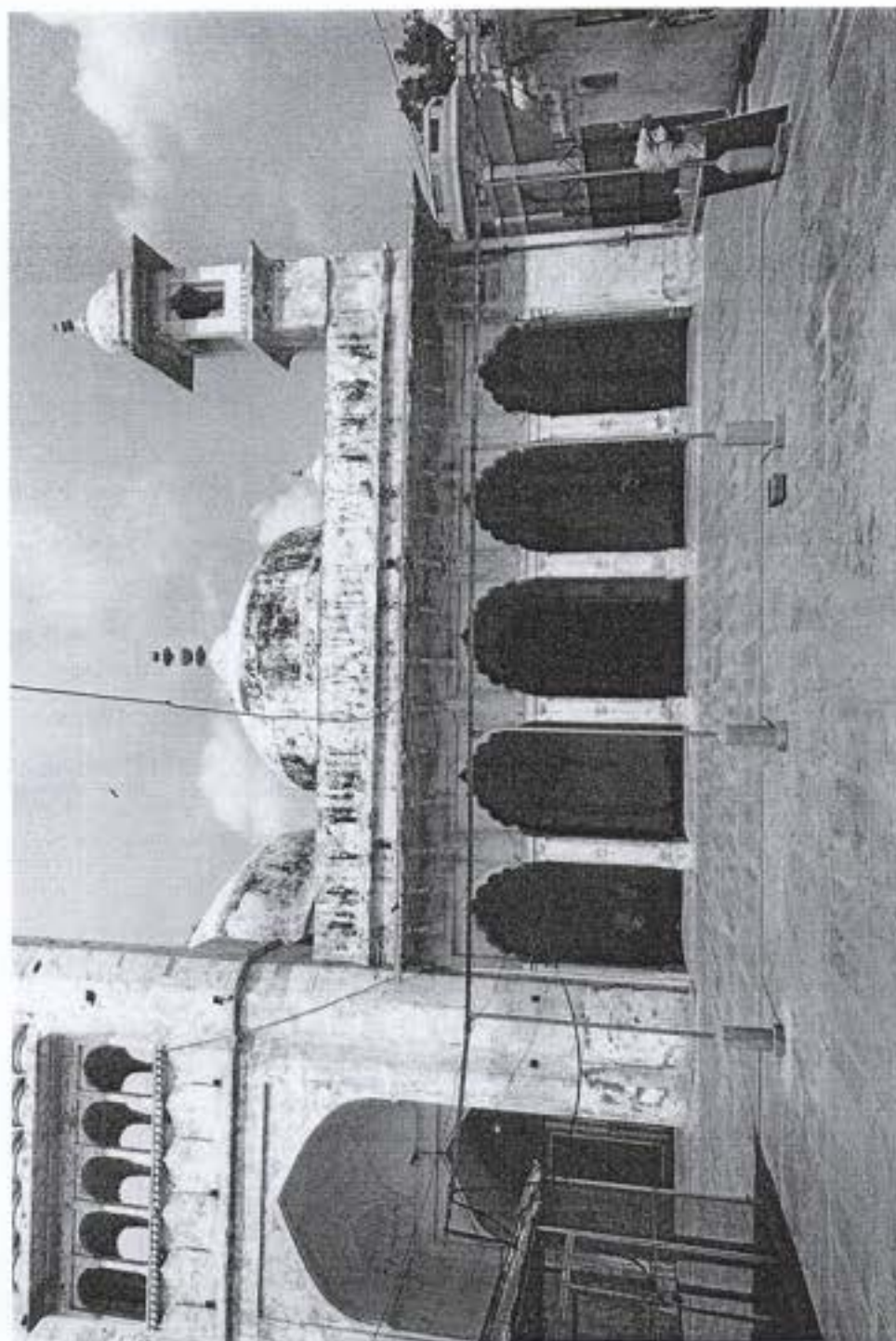


Existing Structure: Chhatra on southeast corner

404 ST
687

4047
688

88

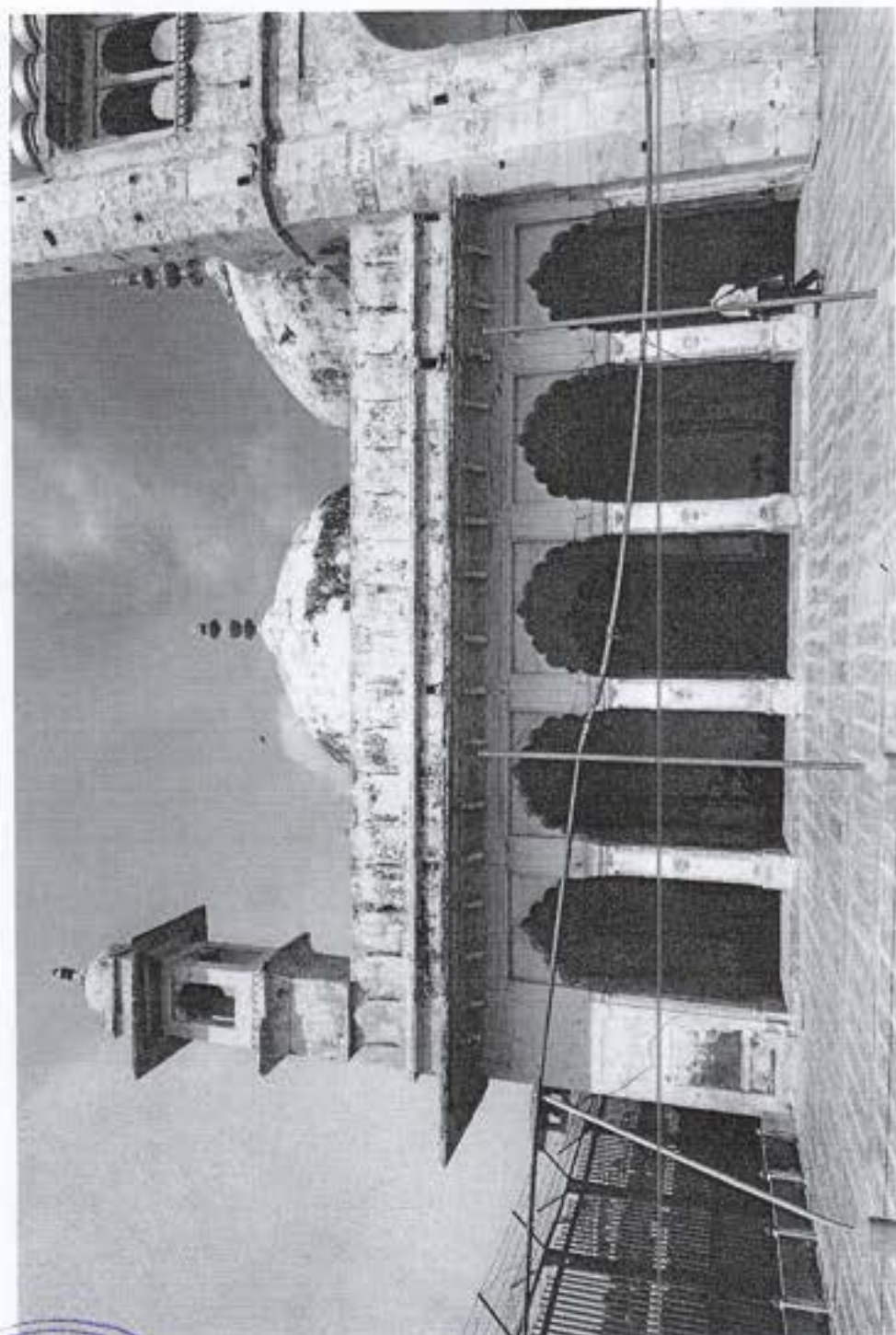


Existing Structure: East corridor (N)



4045
689

89

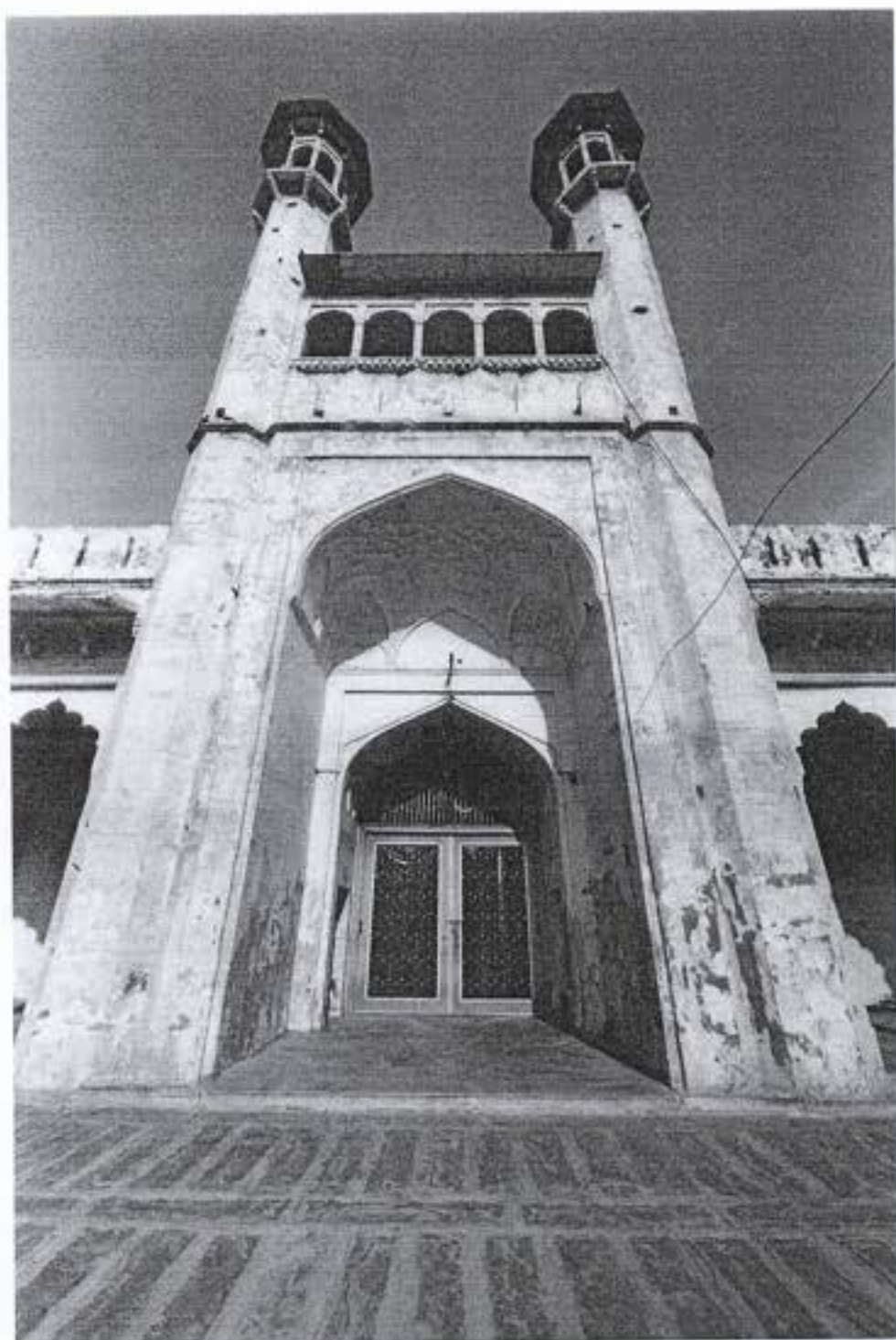


Existing Structure: East corridor (S)



404 JT
690

96

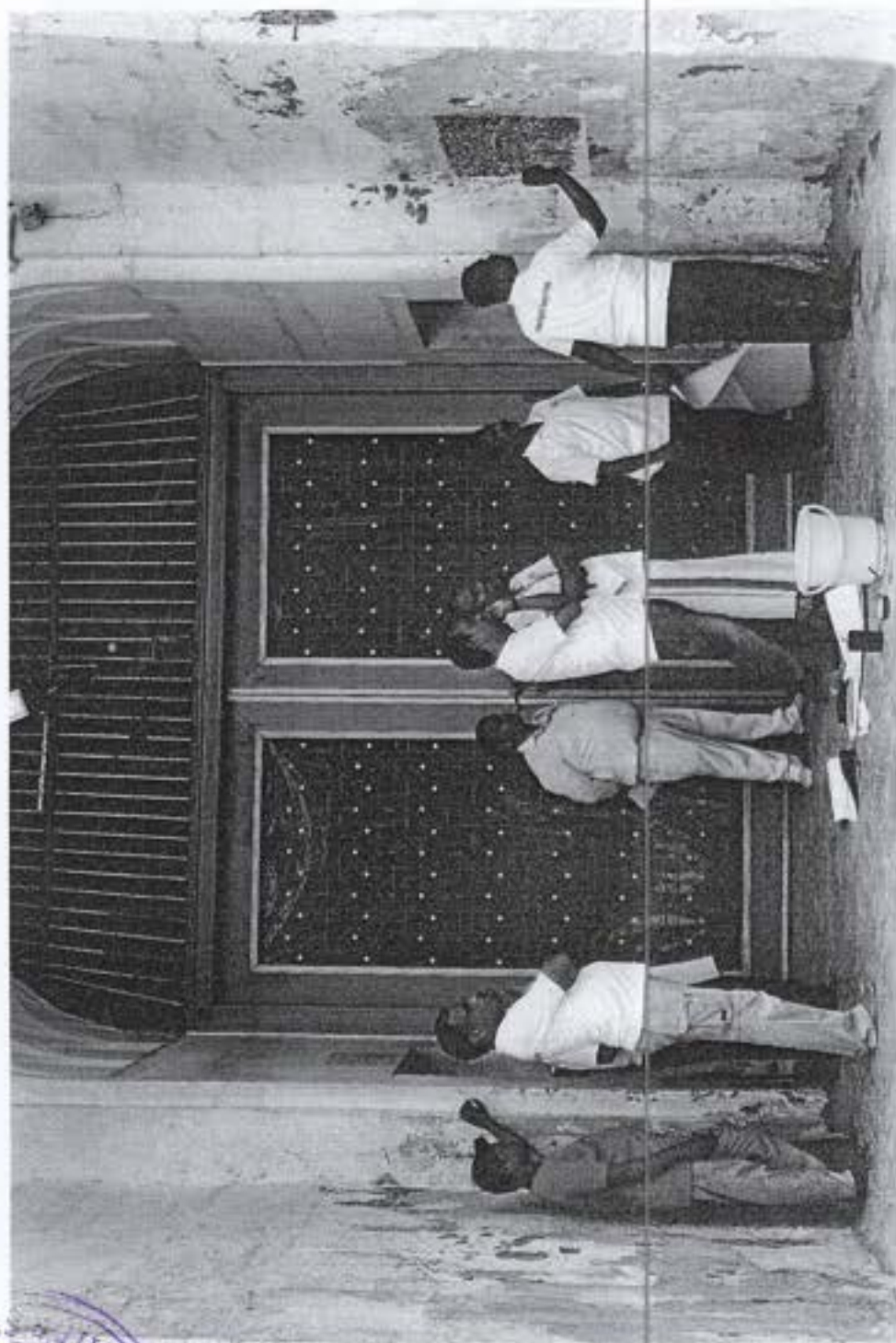


Existing Structure: Minarets and main entrance



4047
691

91

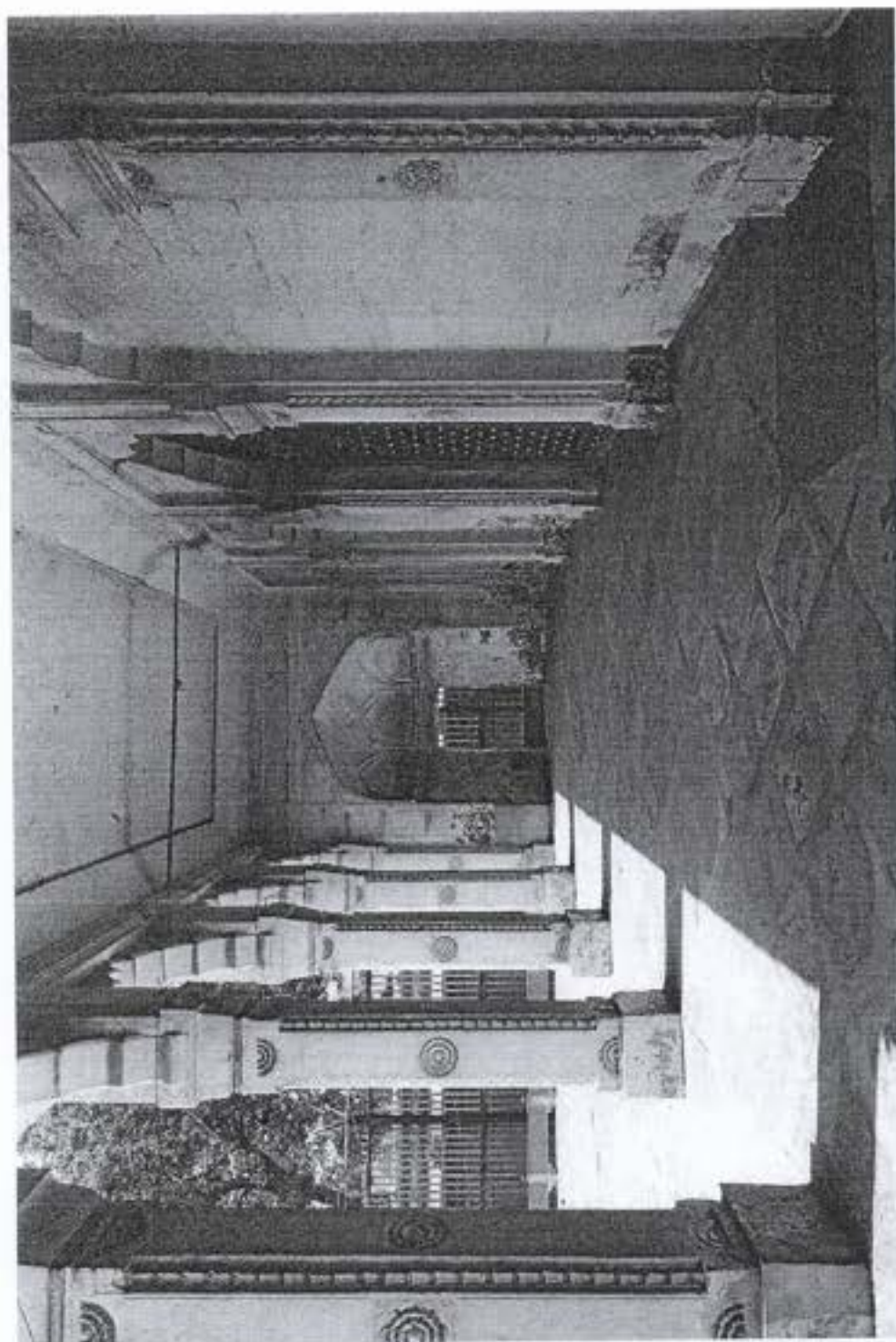


Existing Structure: Inscription on façade



4045T
692

92

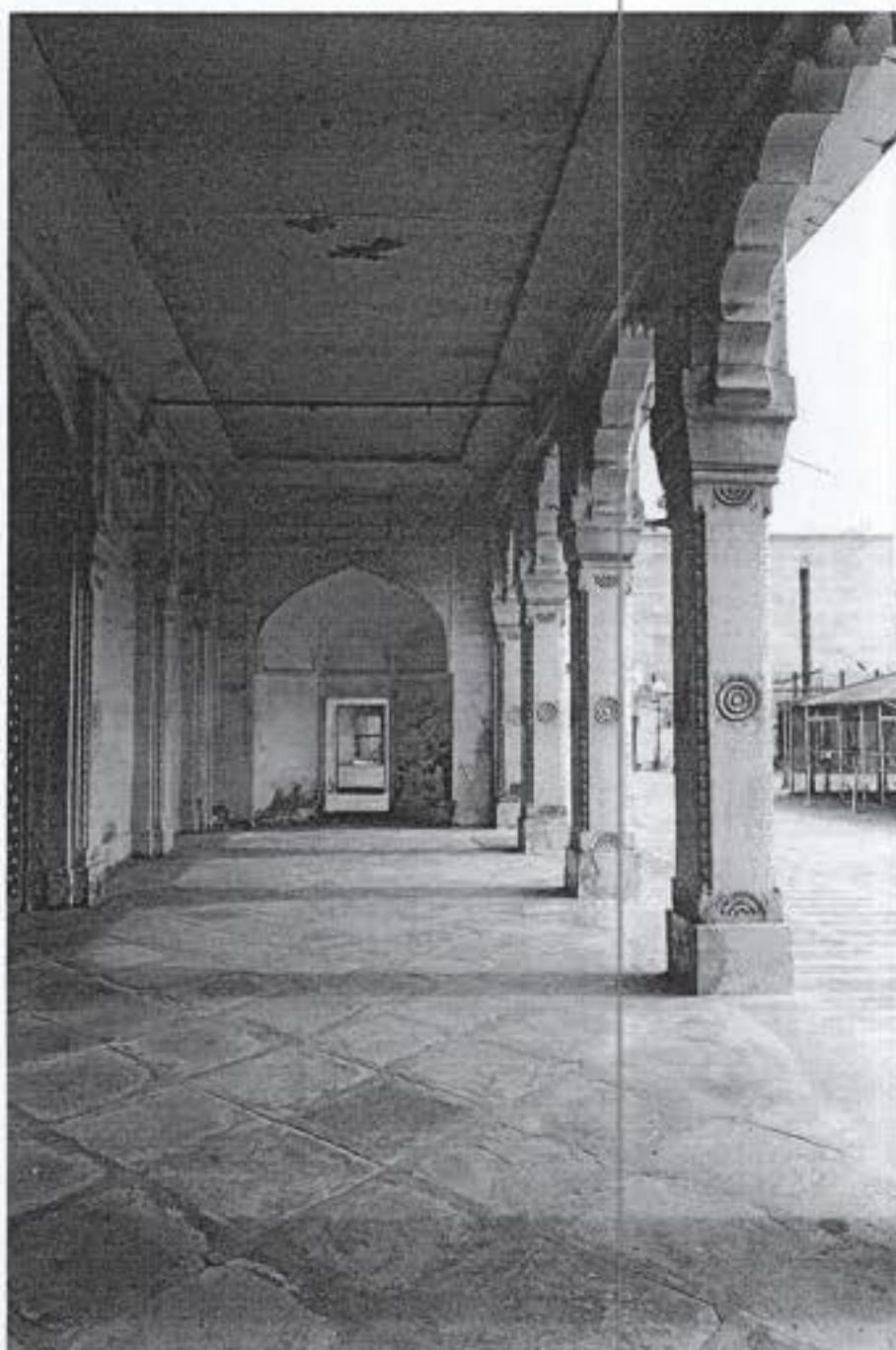


East Corridor: View from north



4045T
693

93

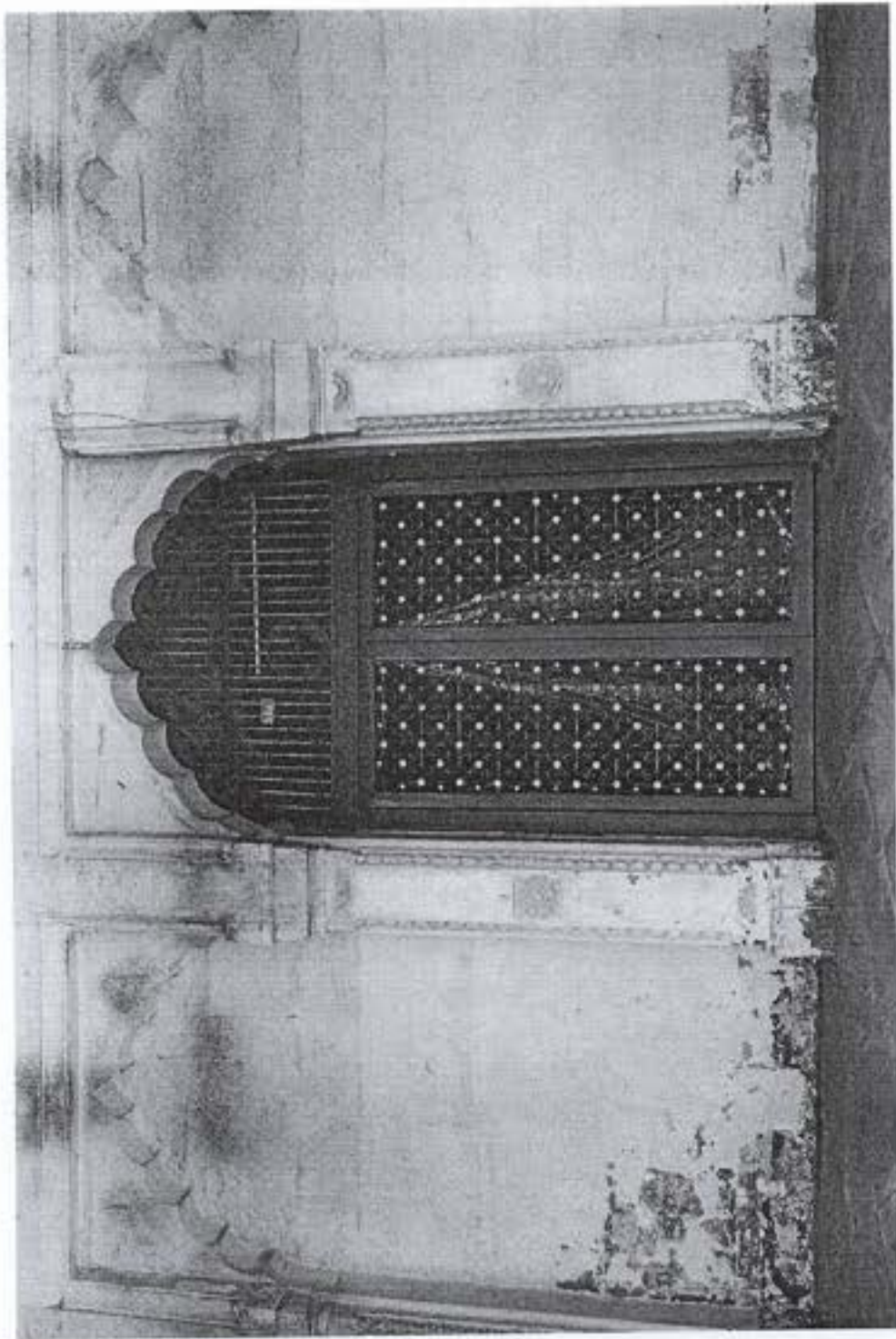


East Corridor: View from south



$$\frac{4045}{694}$$

94

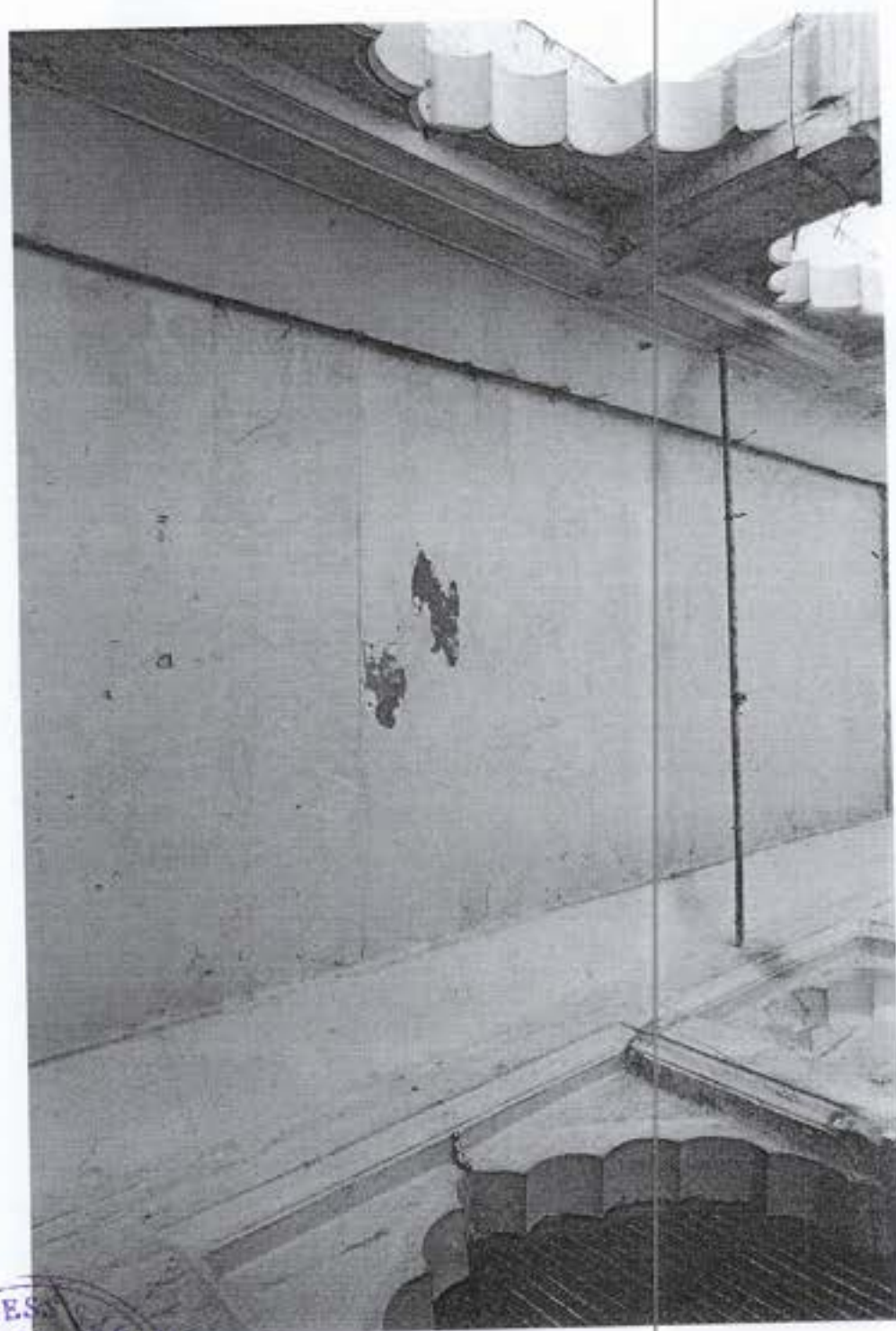


East Corridor: Entrance to south hall



704-5T
695

95

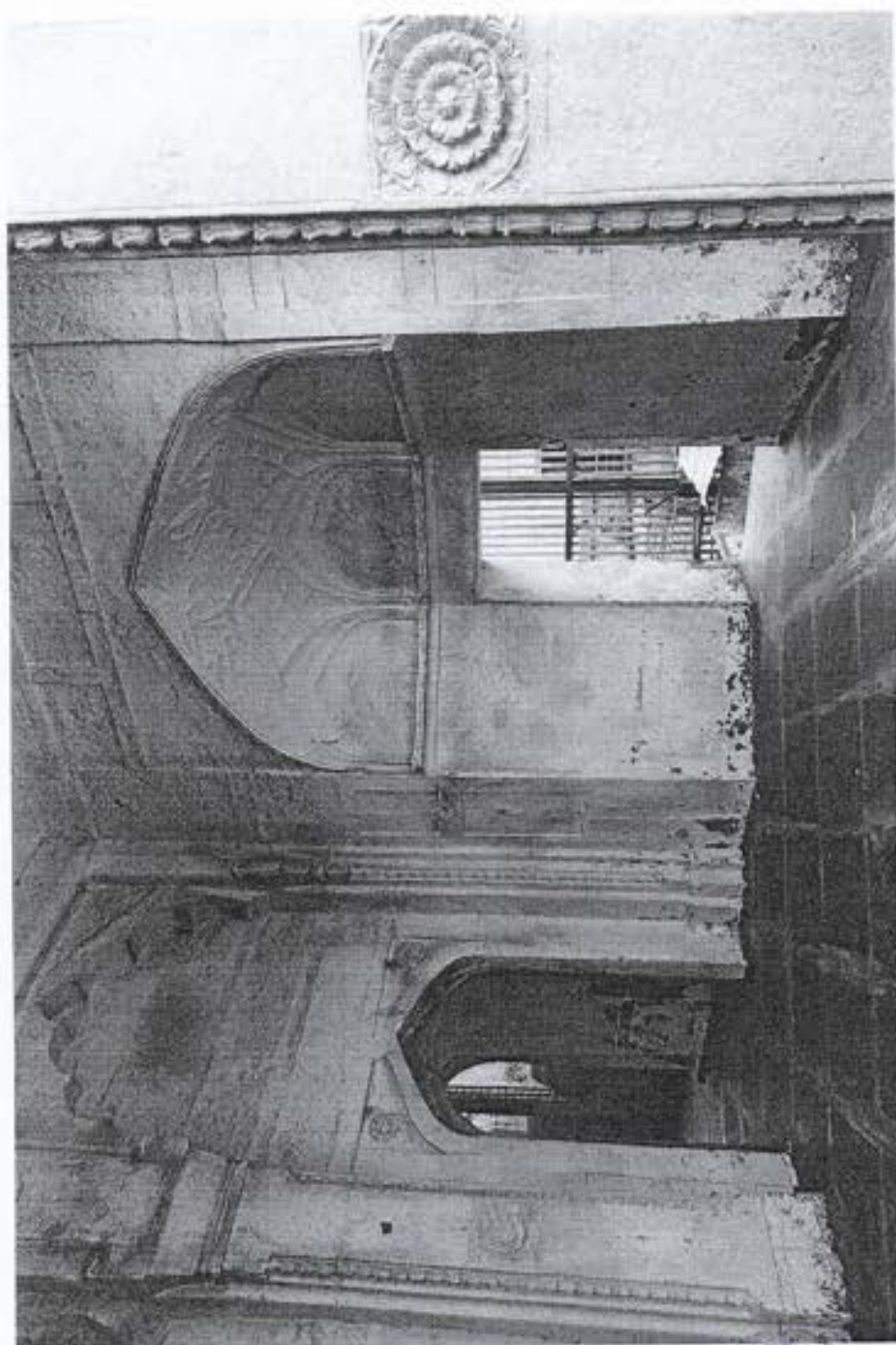


East Corridor: Ceiling



4045
696

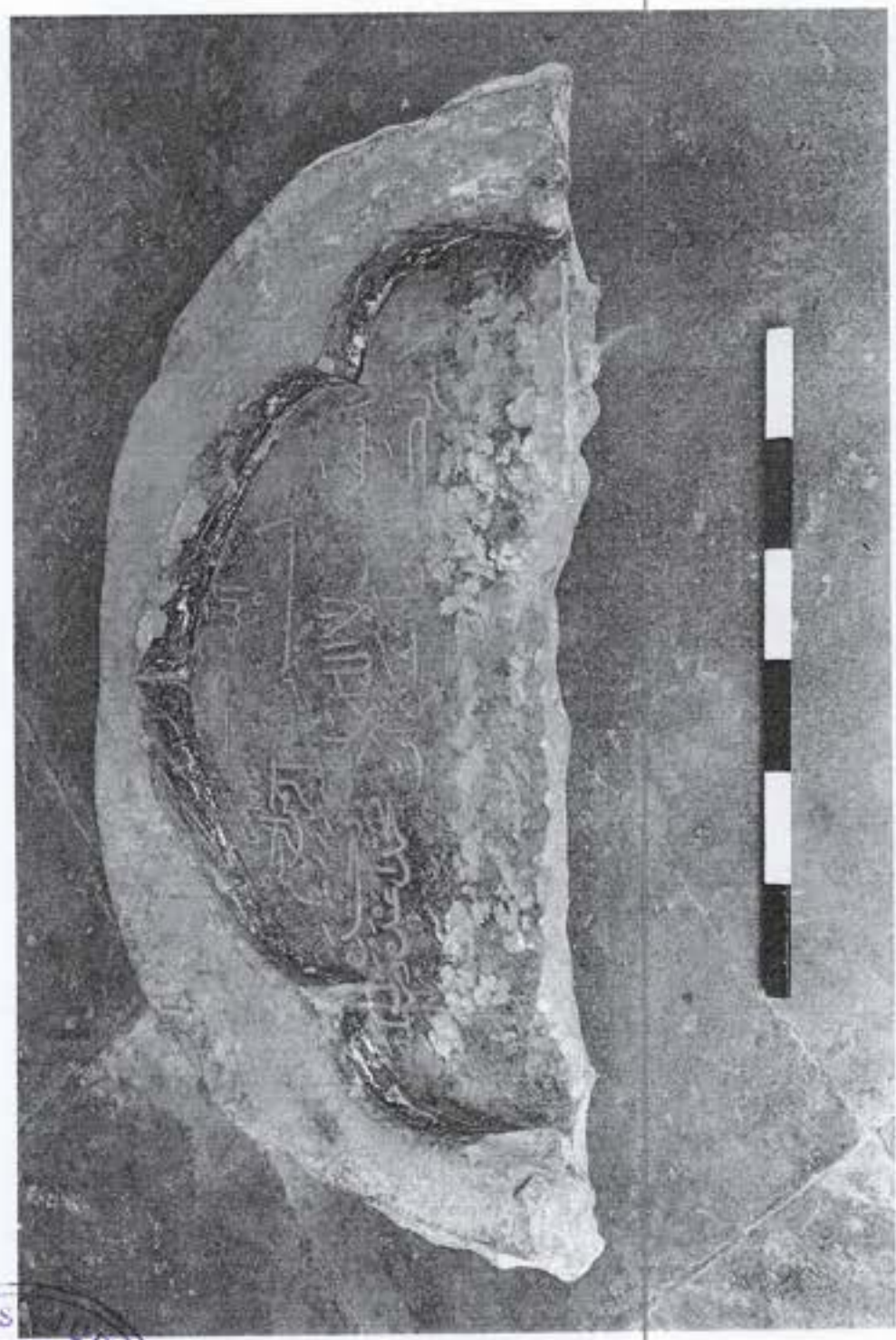
96



East Corridor: Northern end



4047
697

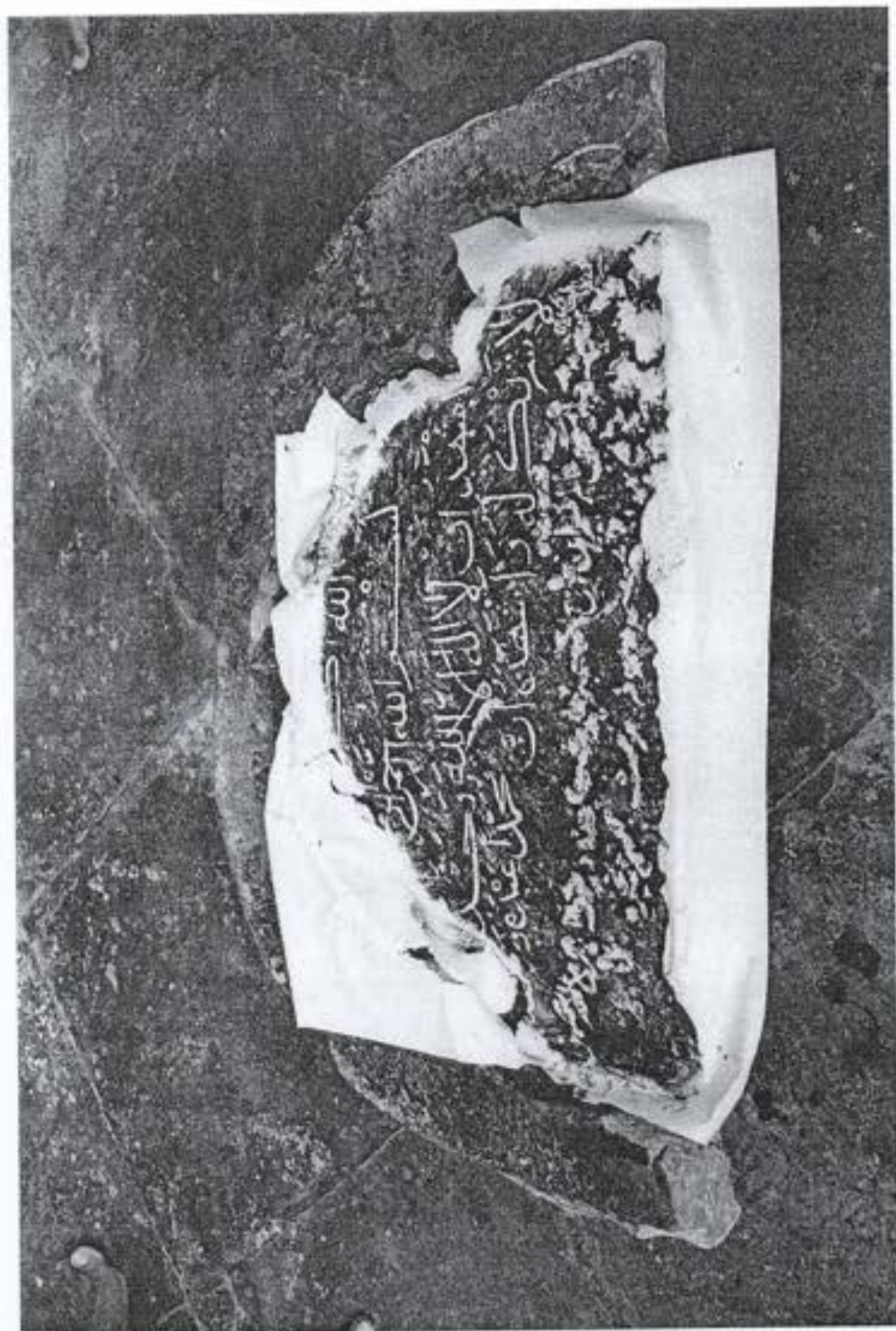


South Corridor: Inscription kept in lower room



4047
698

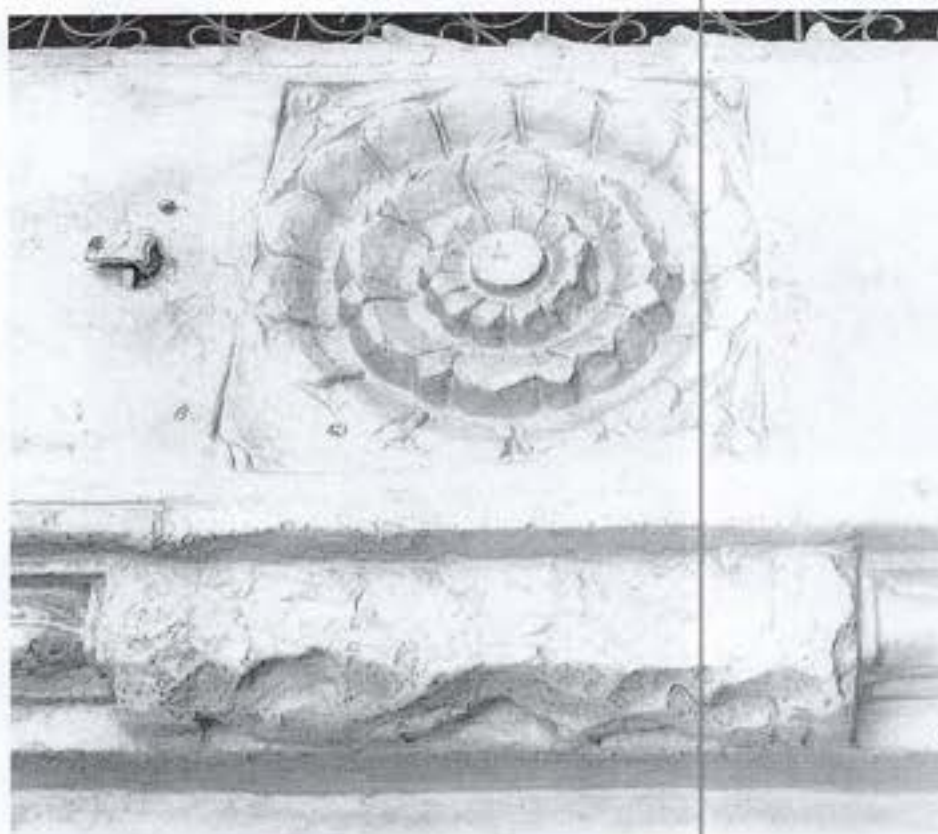
98



South Corridor: Copying inscription



404-51
699



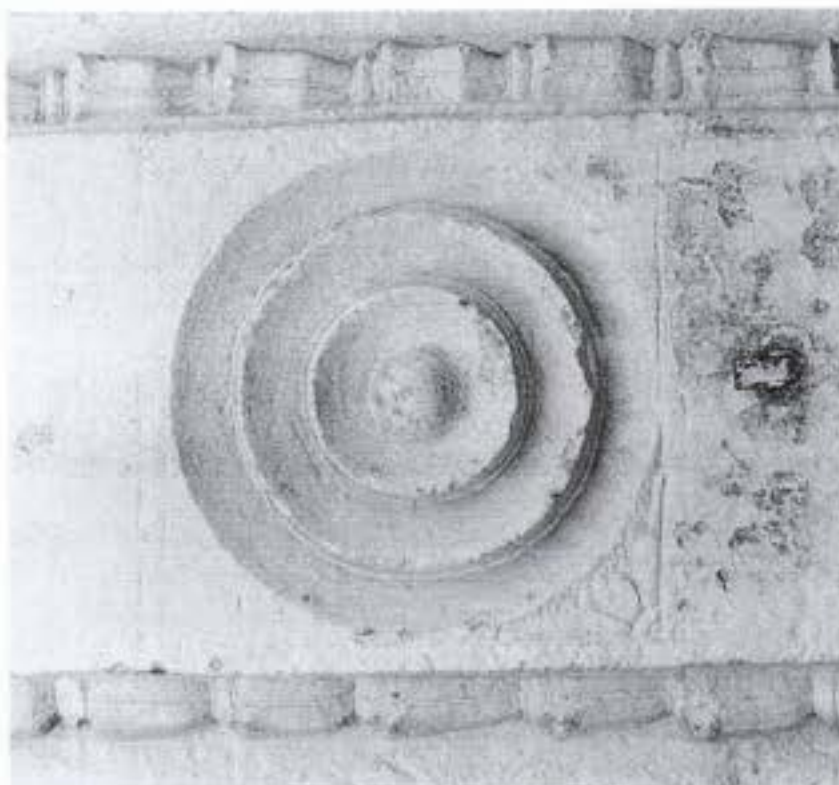
Pillar and Pilaster: Vyala figure, mutilated



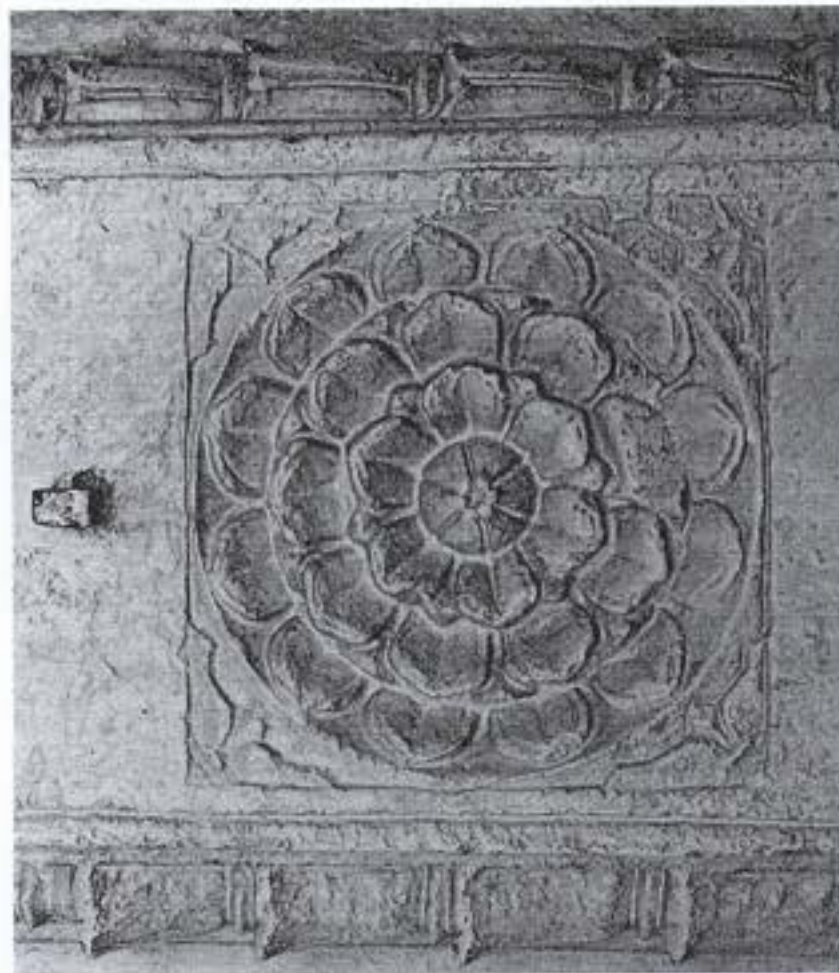
Pillar and Pilaster: Vyala figure



404-51
700



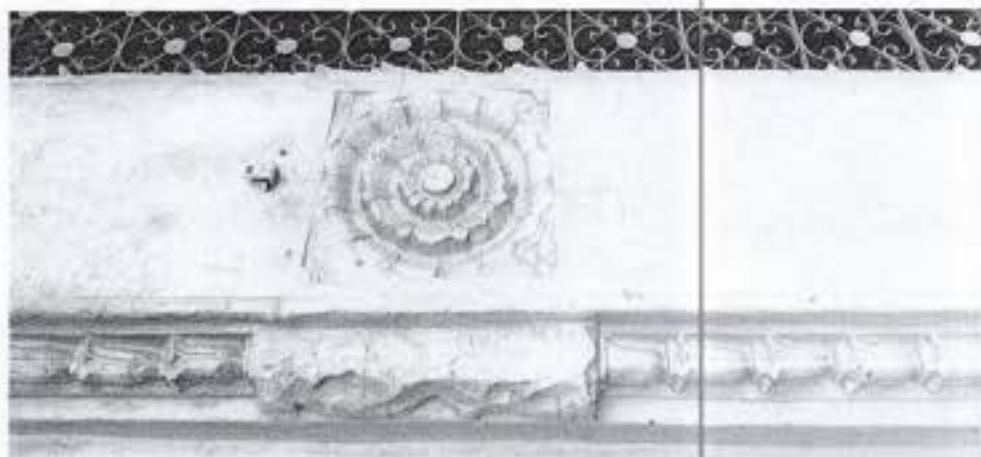
Pillar and Pilaster: Irregular shape and sizes of flower buds



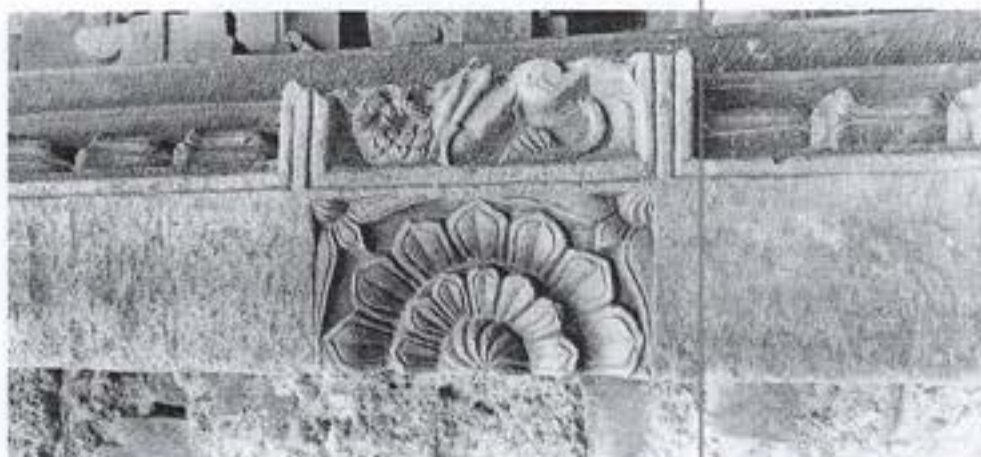
Pillar and Pilaster: Roughly carved flower buds



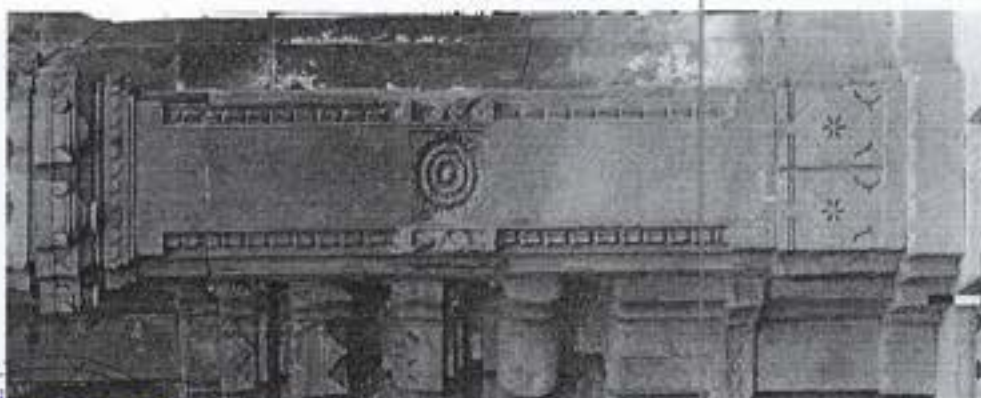
404 J
701



Pillar and Pilaster: Vyala figure, mutilated



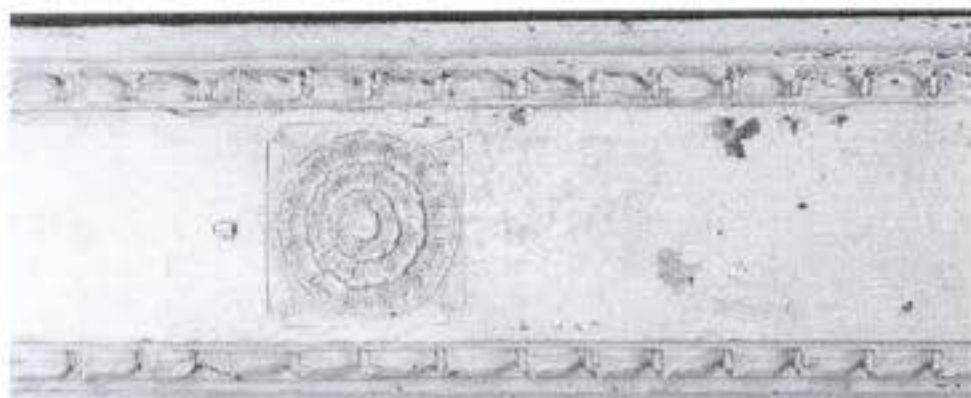
Pillar and Pilaster: Vyala figure (in situ)



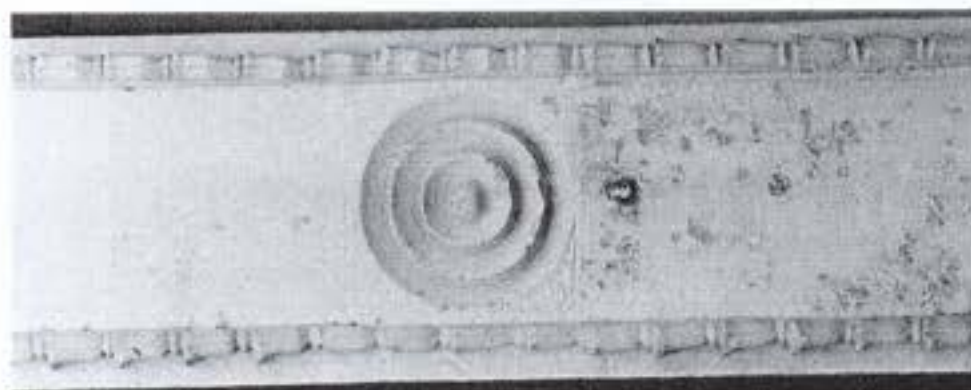
Pillar and Pilaster: Vyala figure (in situ)



4045T
702



Pillar and Pilaster: Irregular shape and sizes of flower buds



Pillar and Pilaster: Roughly carved flower buds

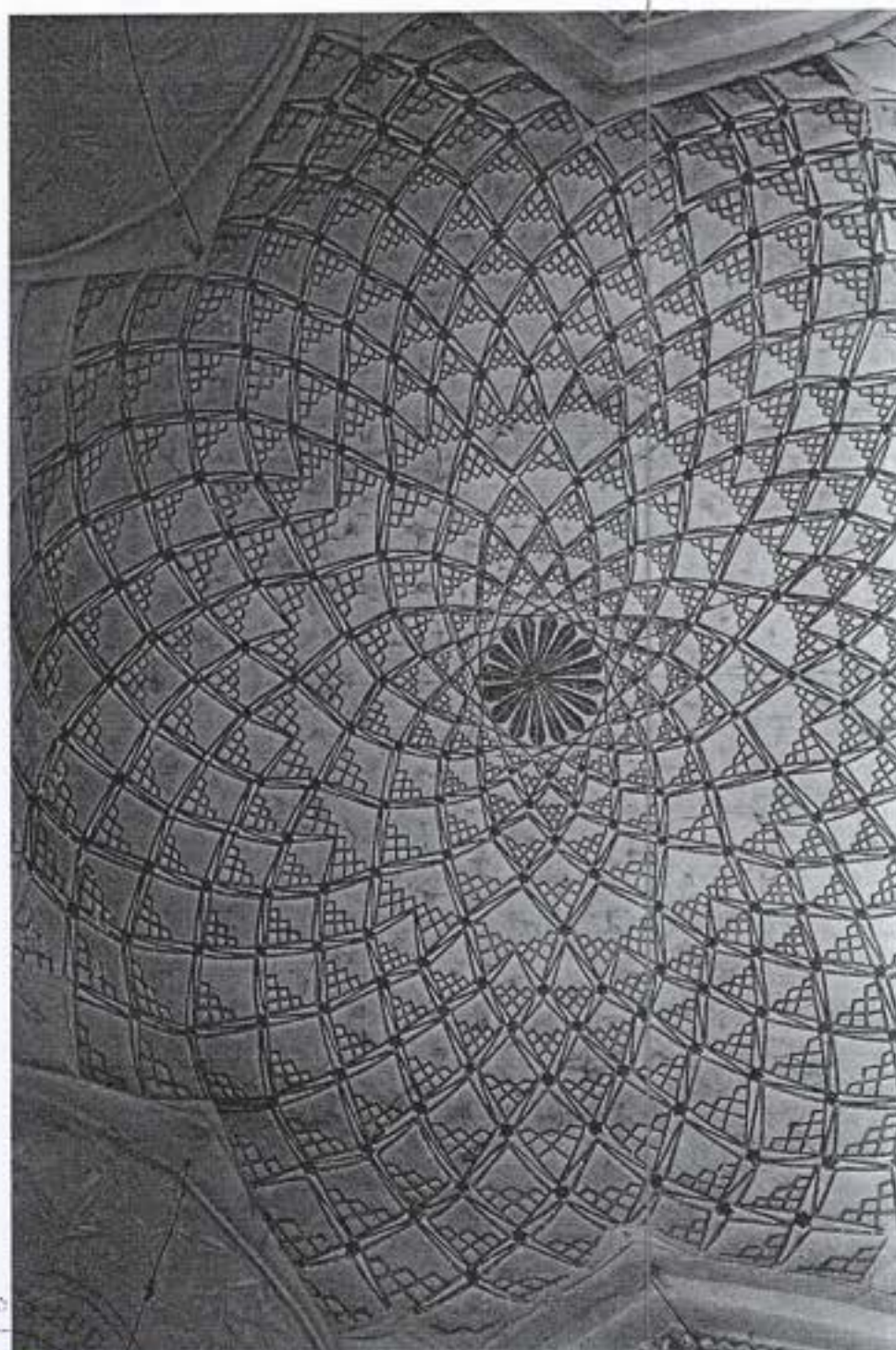


Pillar and Pilaster: Roughly carved flower buds



404 ST
703

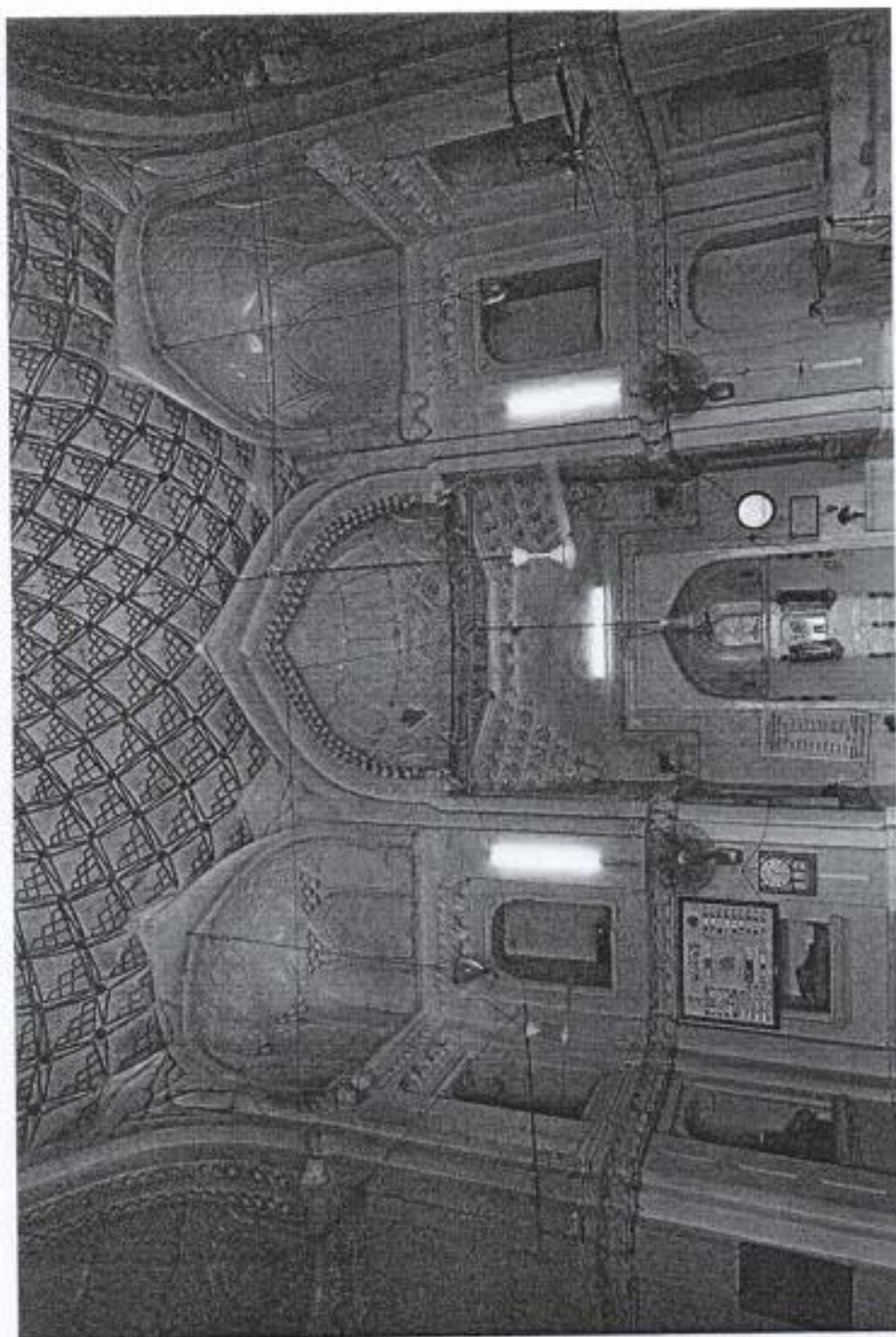
103



Central Hall: Dome from inside



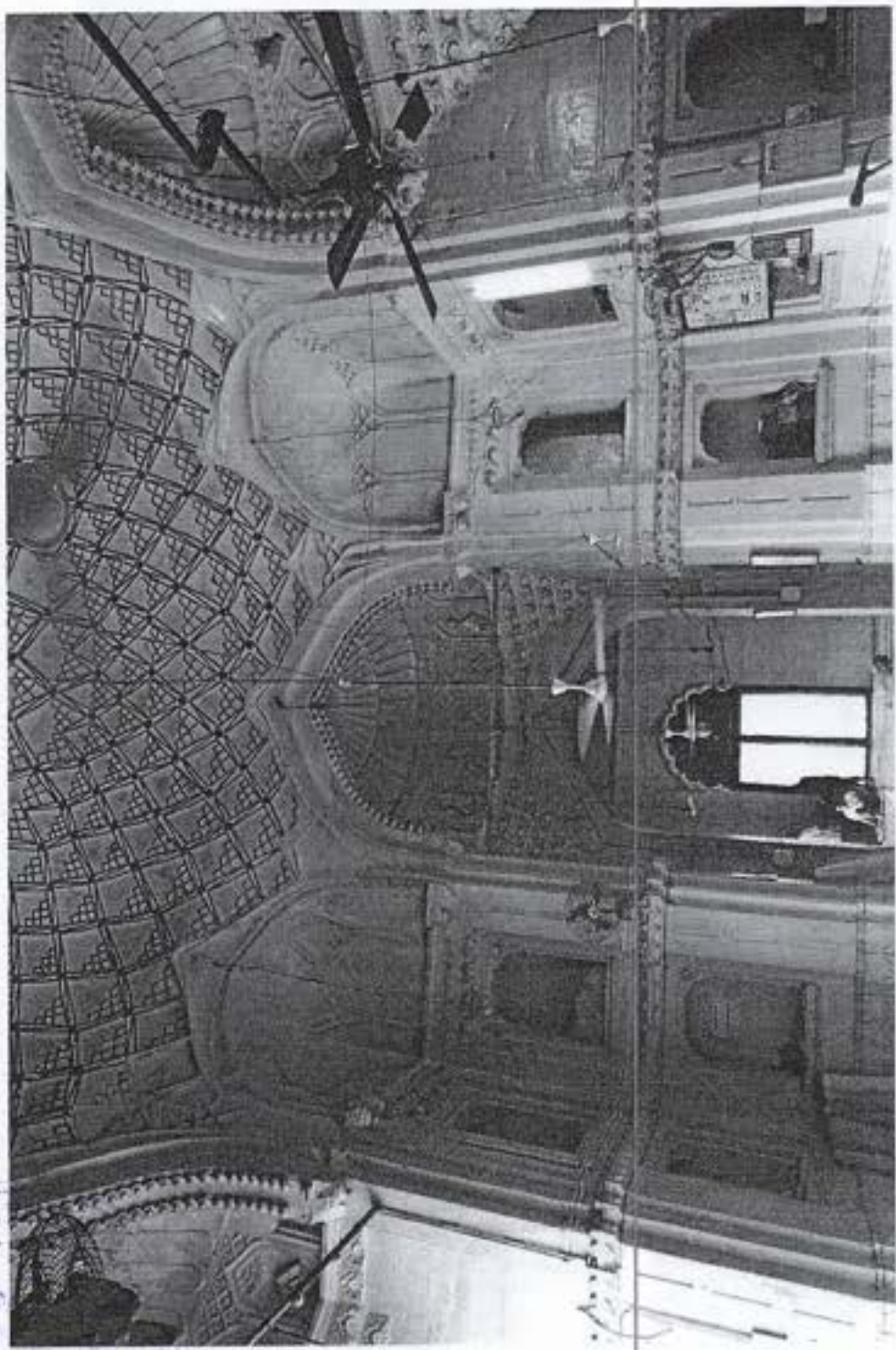
4047
704



Central Hall: Western wall with qibla



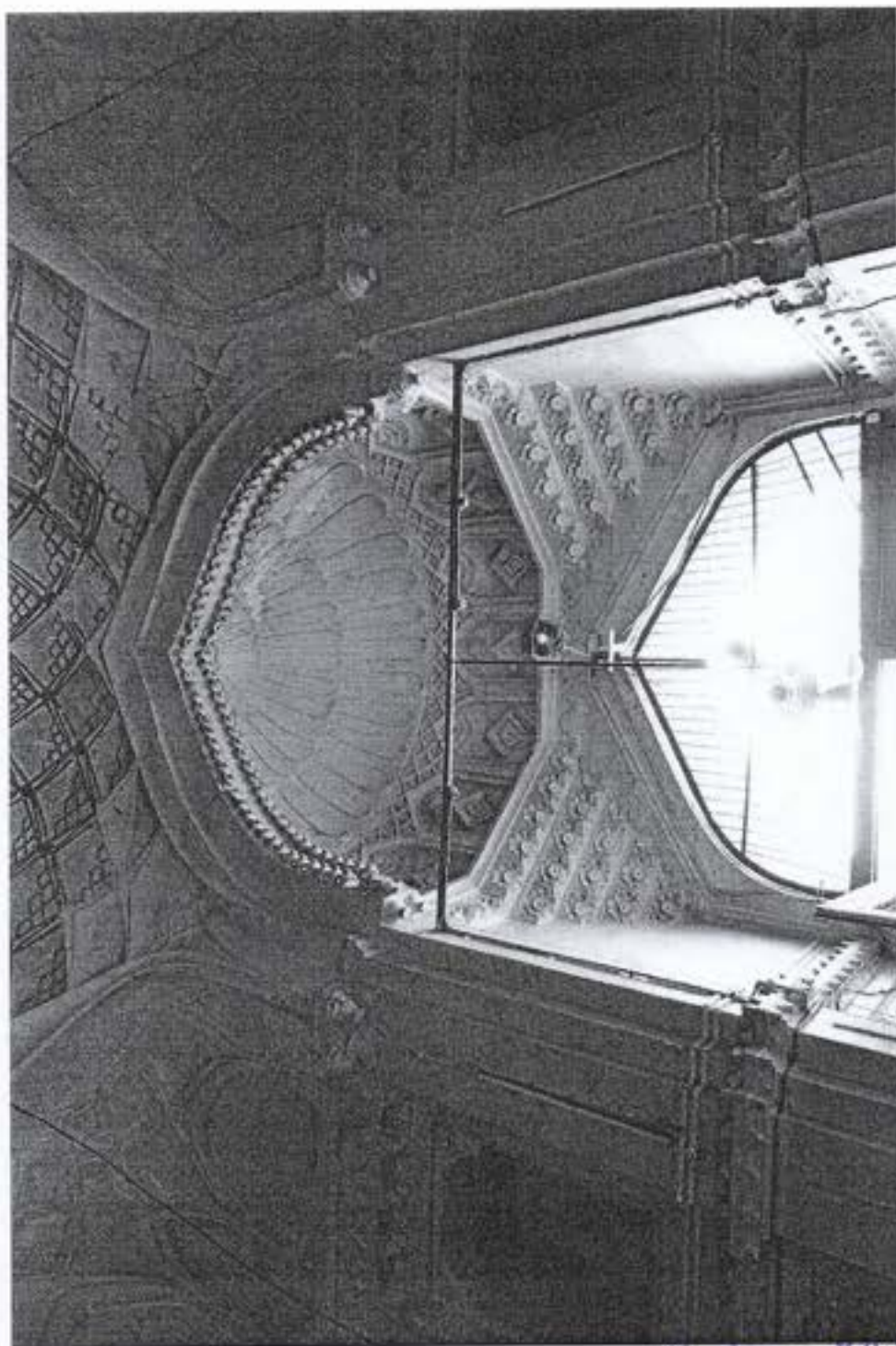
4e45
705



Central Hall: Southern wall with arched opening



4047
706

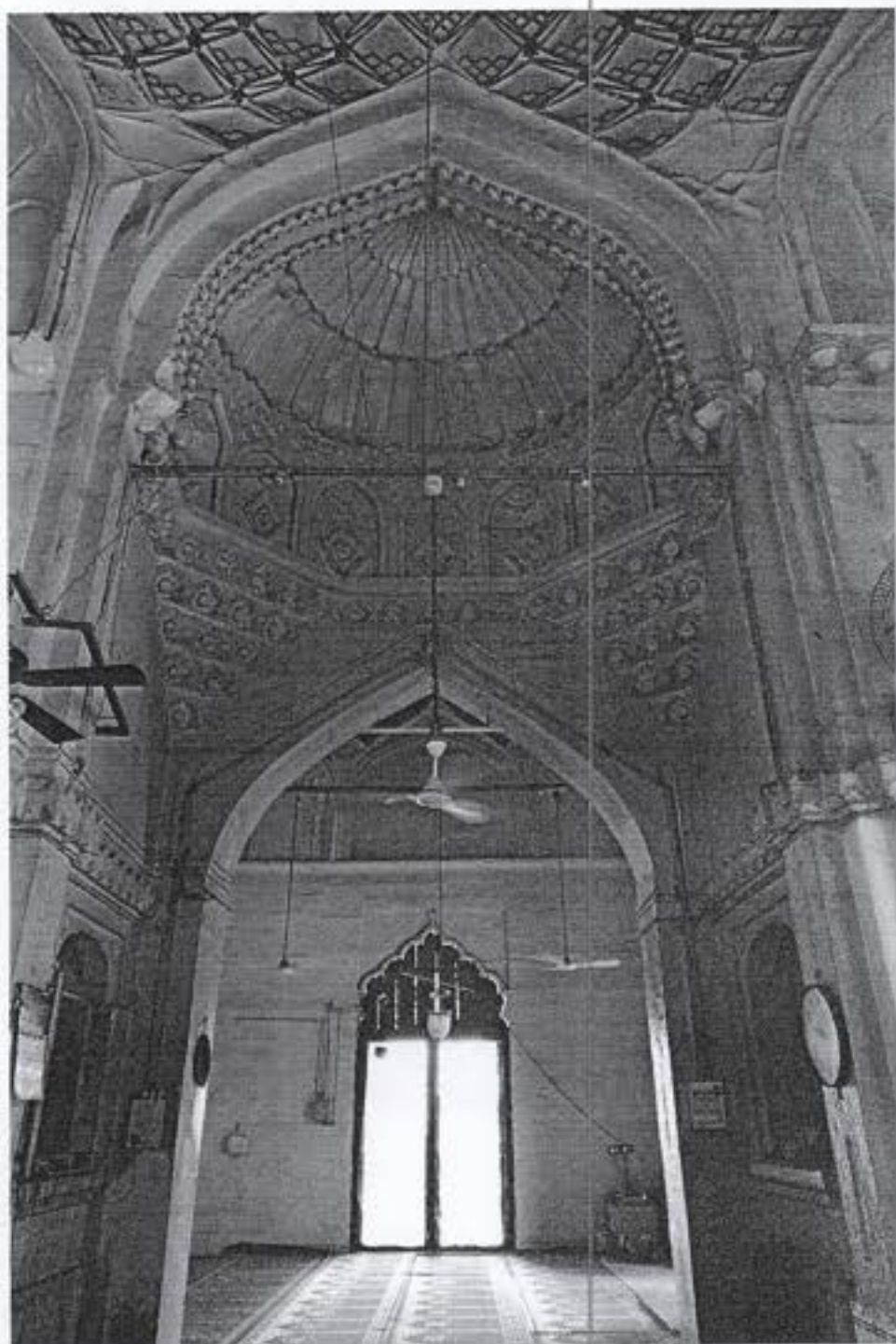


Central Hall: Central arch in eastern wall



404-51
707

107

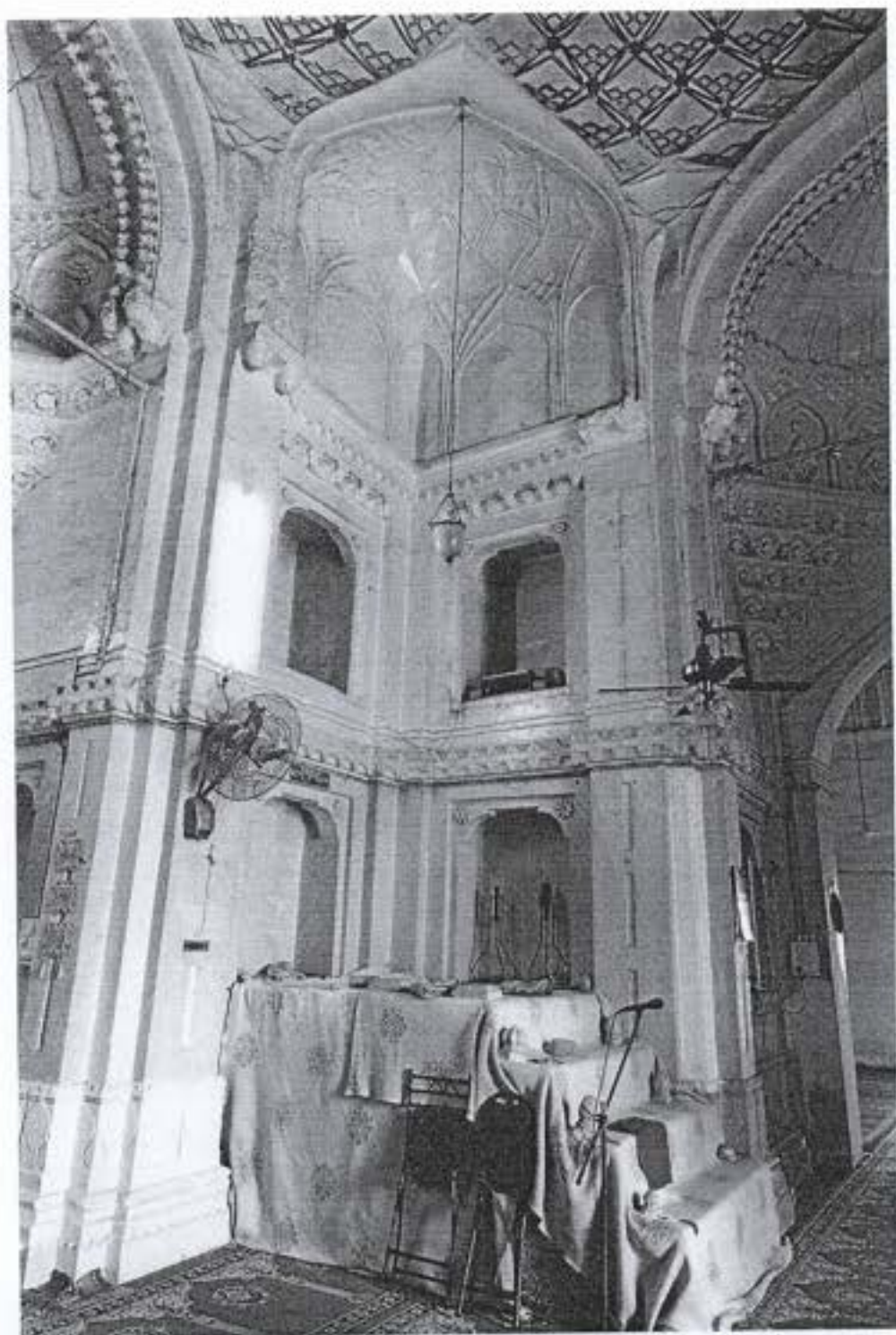


Central Hall: Central arch in northern wall



4045
708

108

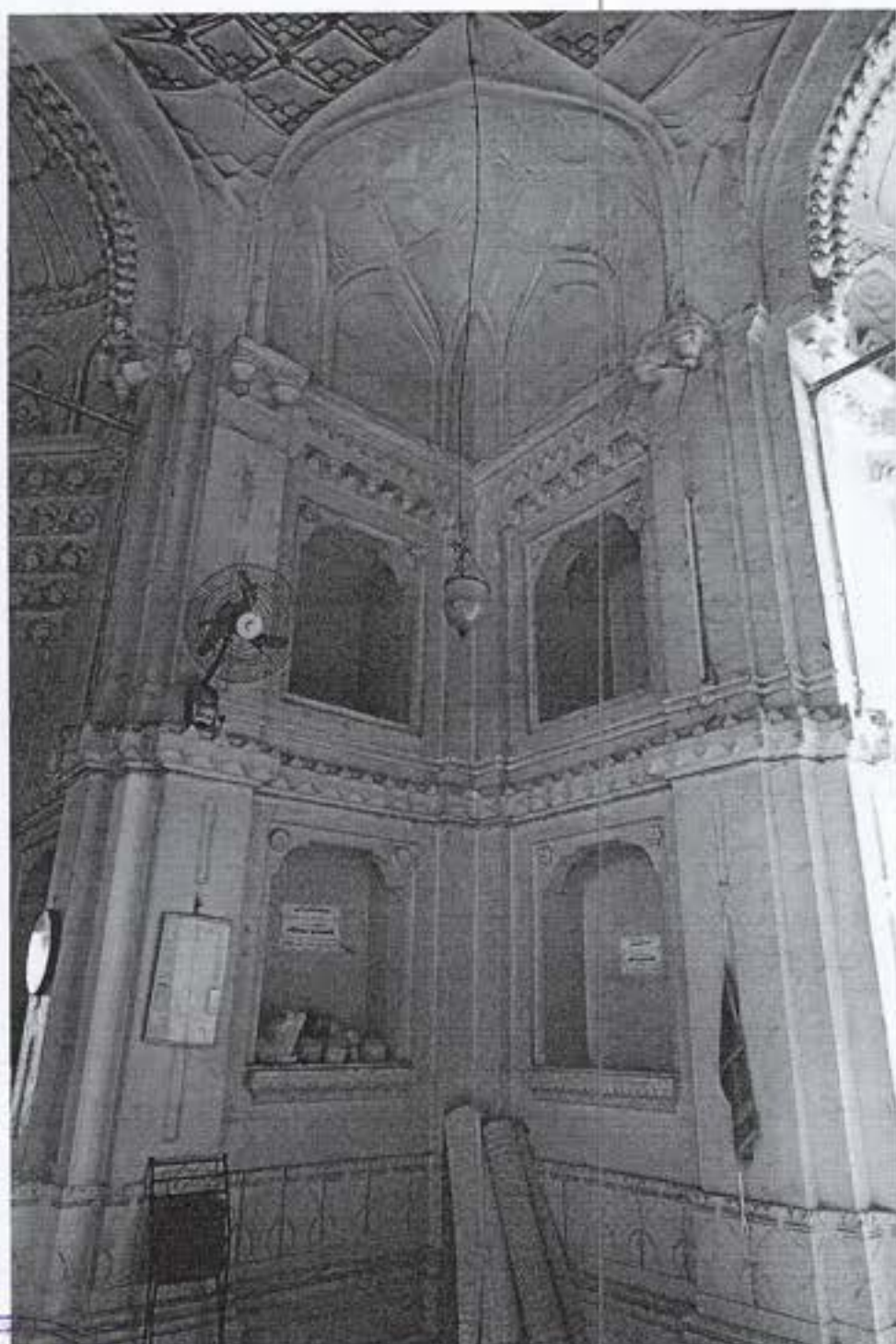


Central Hall: Northwest corner



4045T
709

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Central Hall: Northeast corner



404T
710

110



Central Hall: Southeast corner



4045T
711

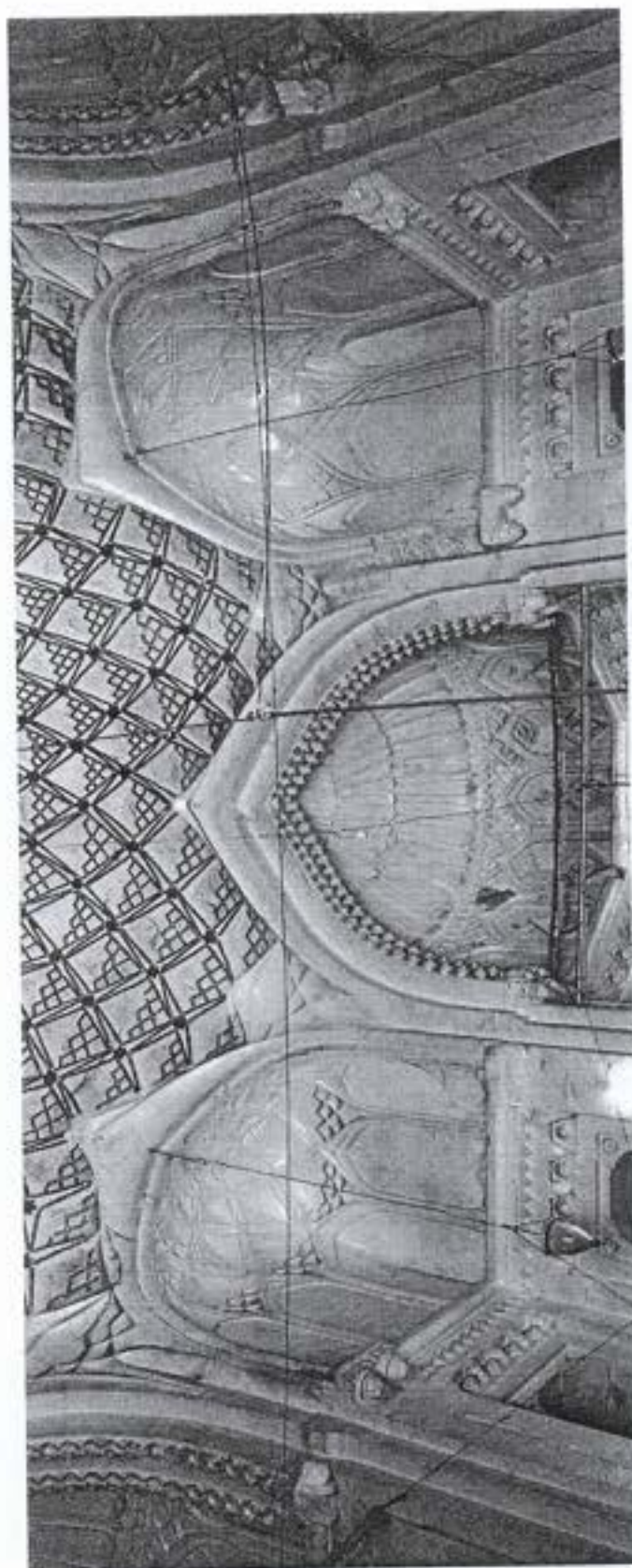
111



Central Hall: Southwest corner



4095T
712



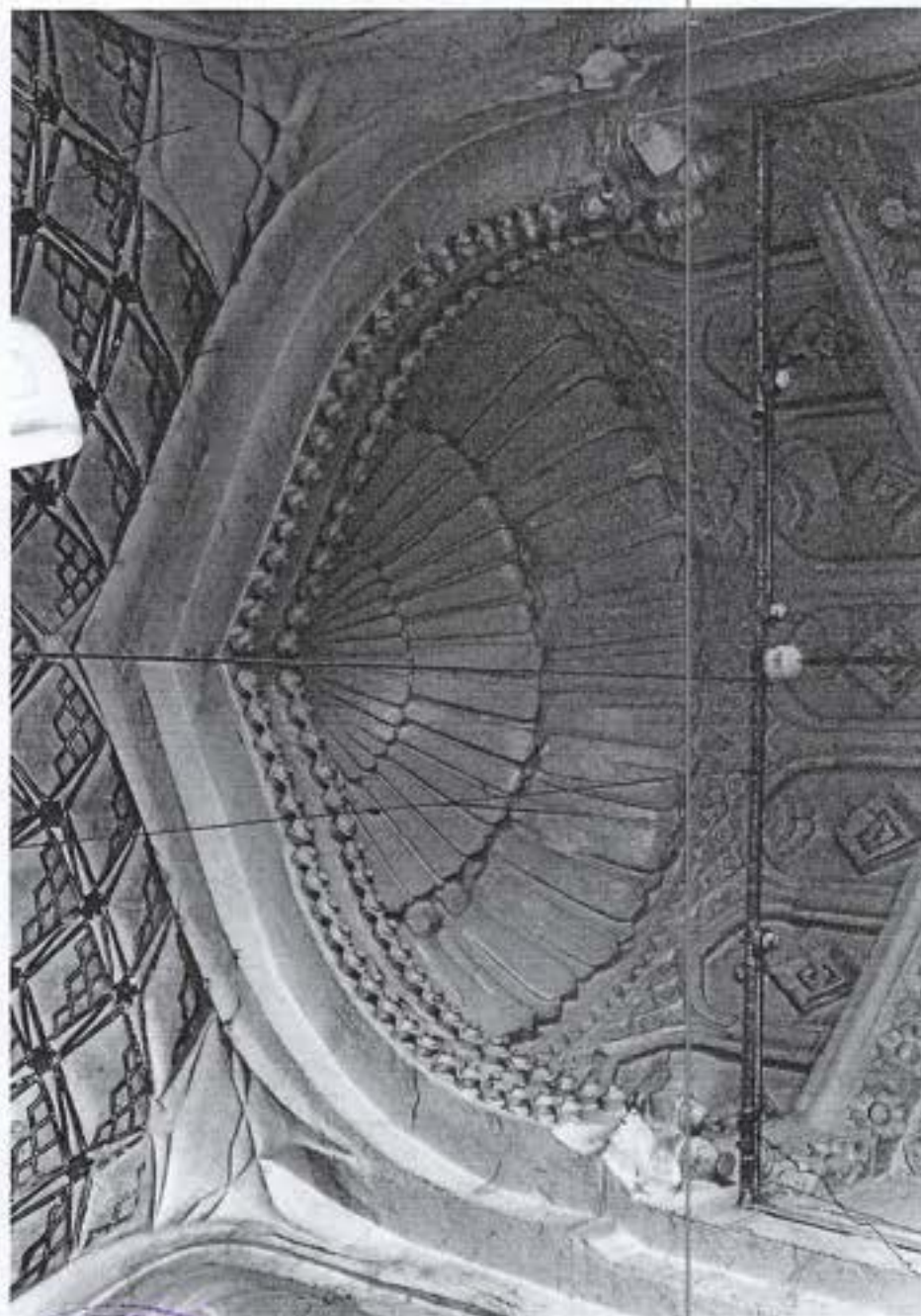
Central Hall: West side arches with damage at lower ends





Central Hall: South side arches with damage at lower ends

4045
713

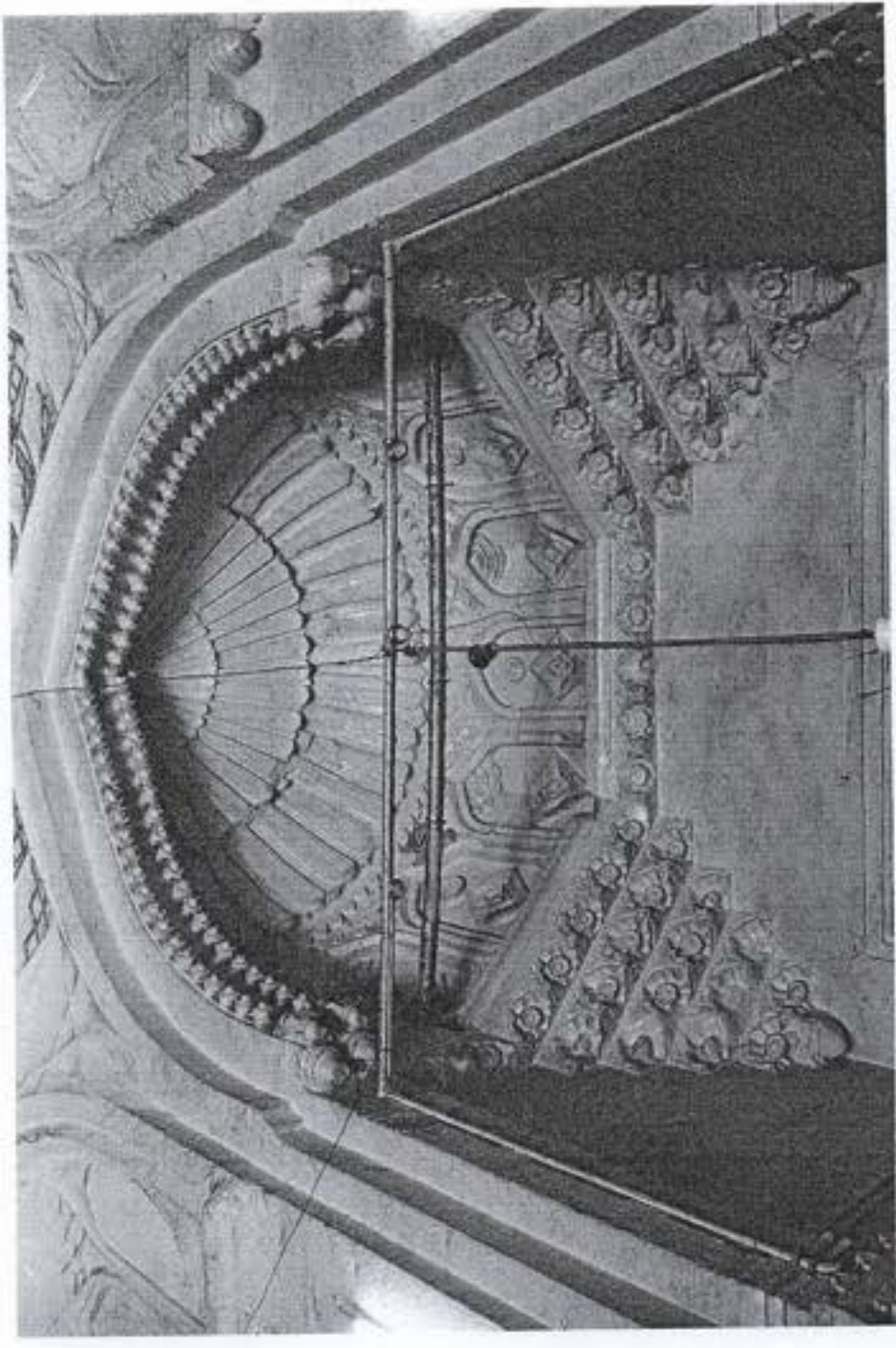


Central Hall: Southern arch with damage at lower ends

4045
715



4047
716



Central Hall: Western arch



4045
717

117

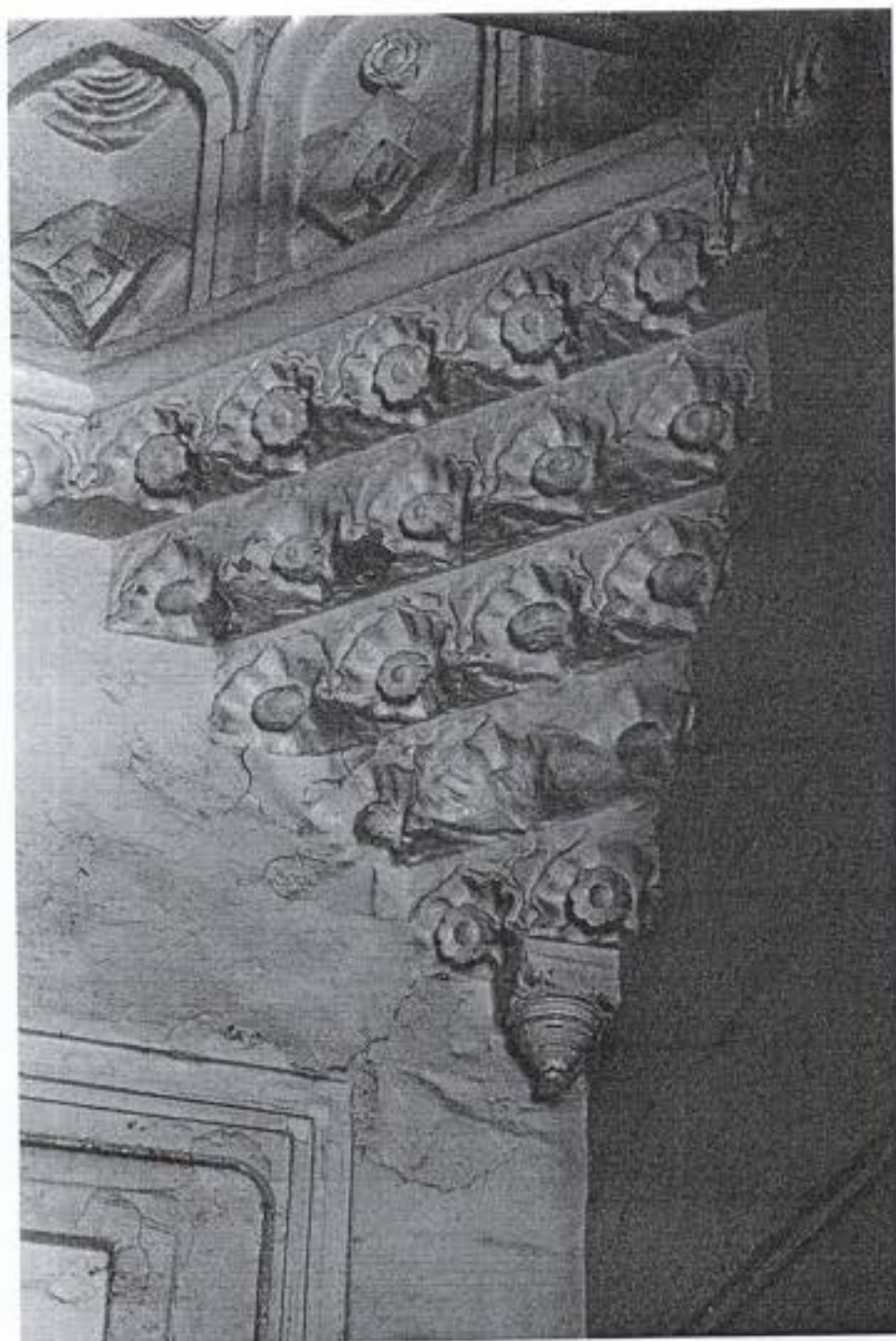


Central Hall: Western arch, southwest corner



404T
718

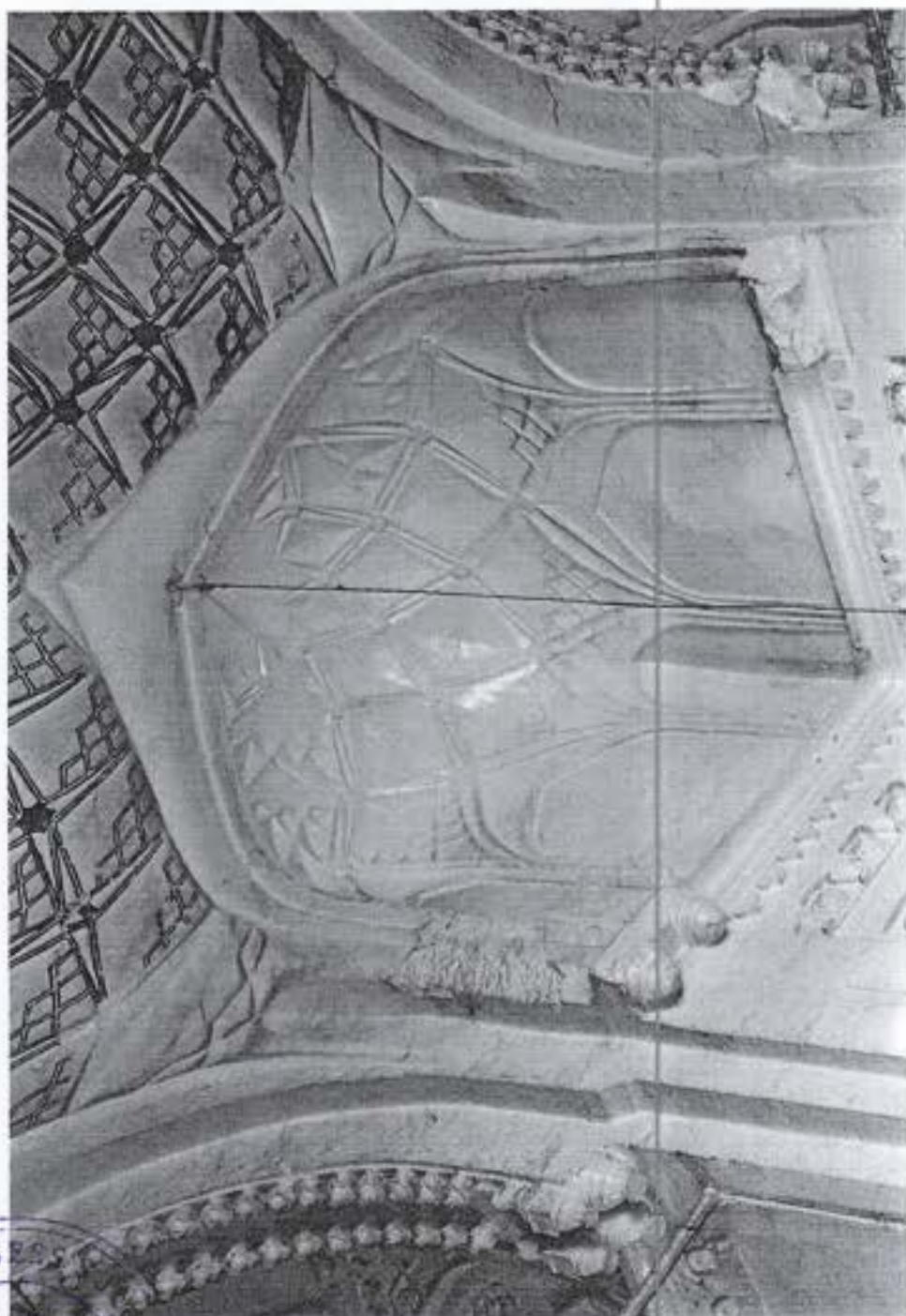
118



Central Hall: Western arch, northwest corner



4045T
719



Central Hall: Northwest corner



4045
720



Central Hall: Southeast corner



404-5T
721

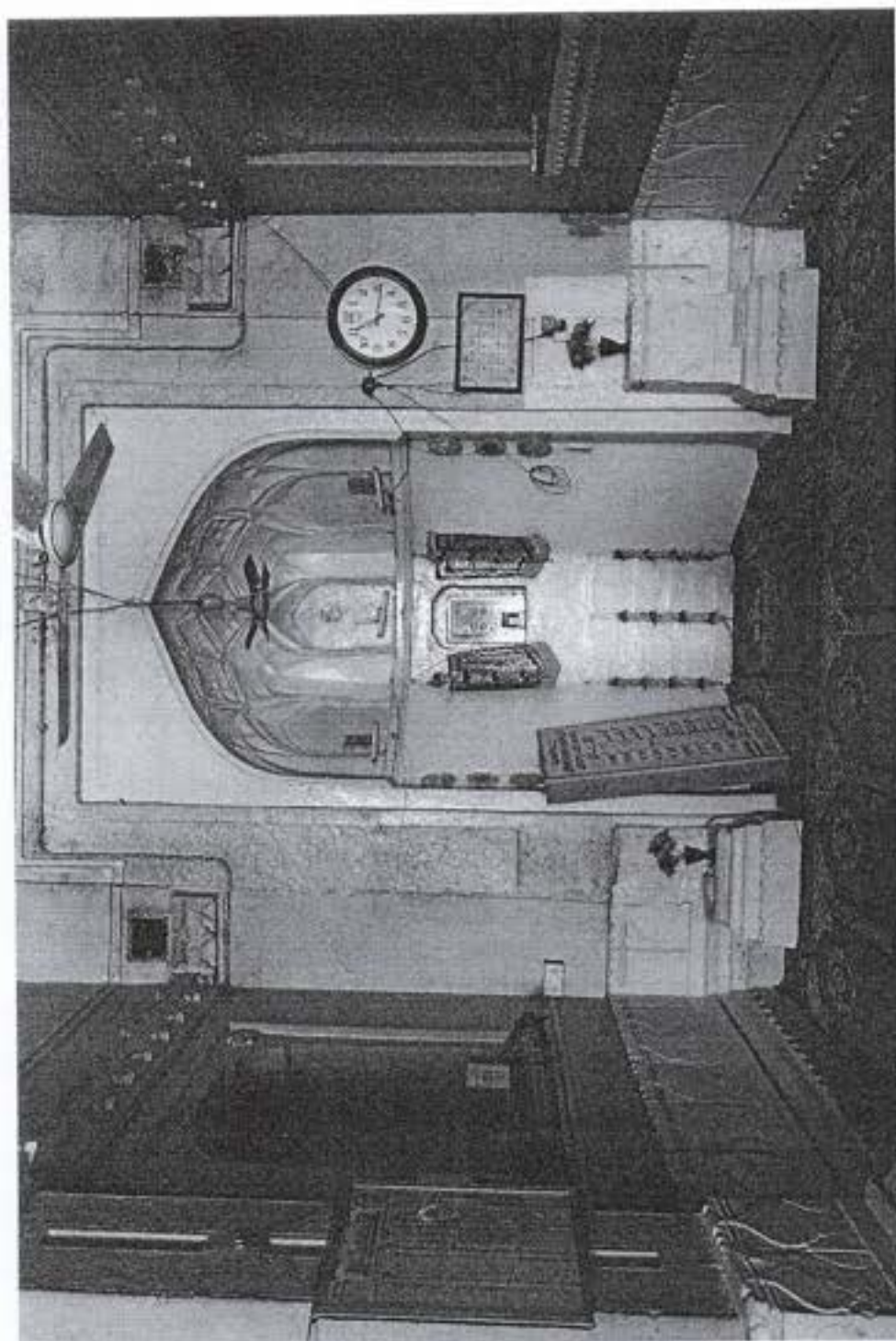
121



Central Hall: Heavy slab running beneath the arch at floor level



4045
722

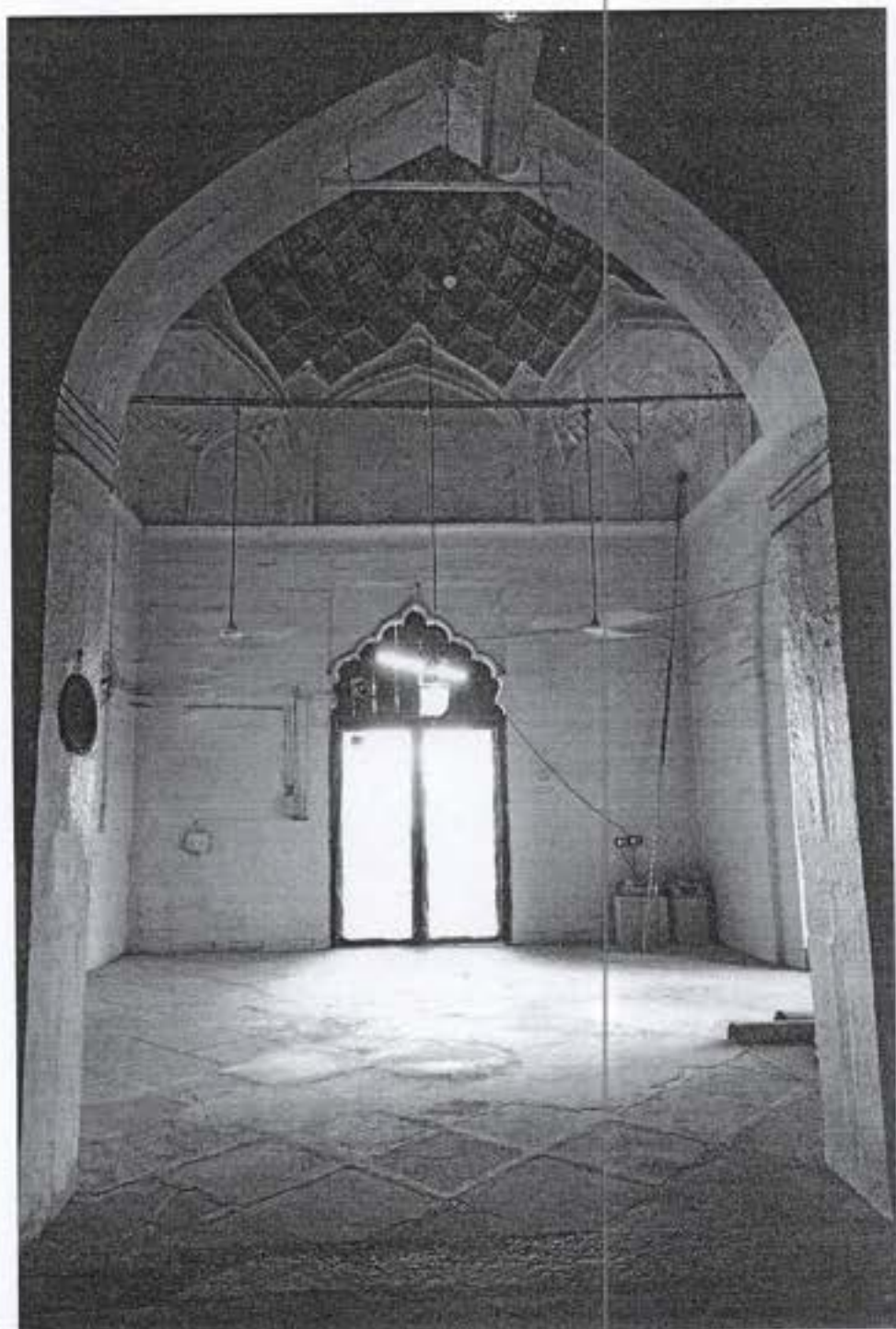


Central Hall: Quibla with damaged pilasters on either side



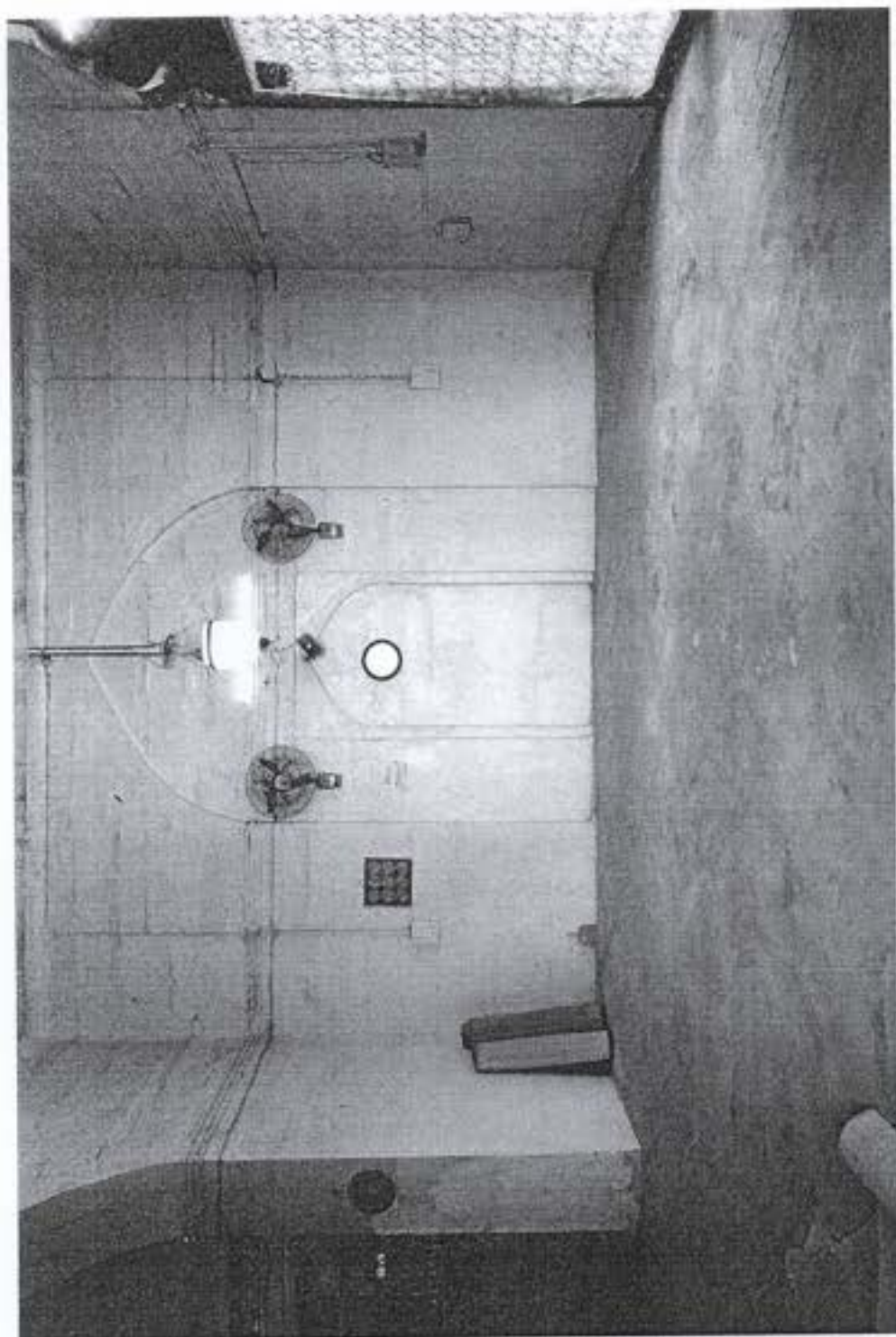
404-7T
723

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North Hall: View from central hall



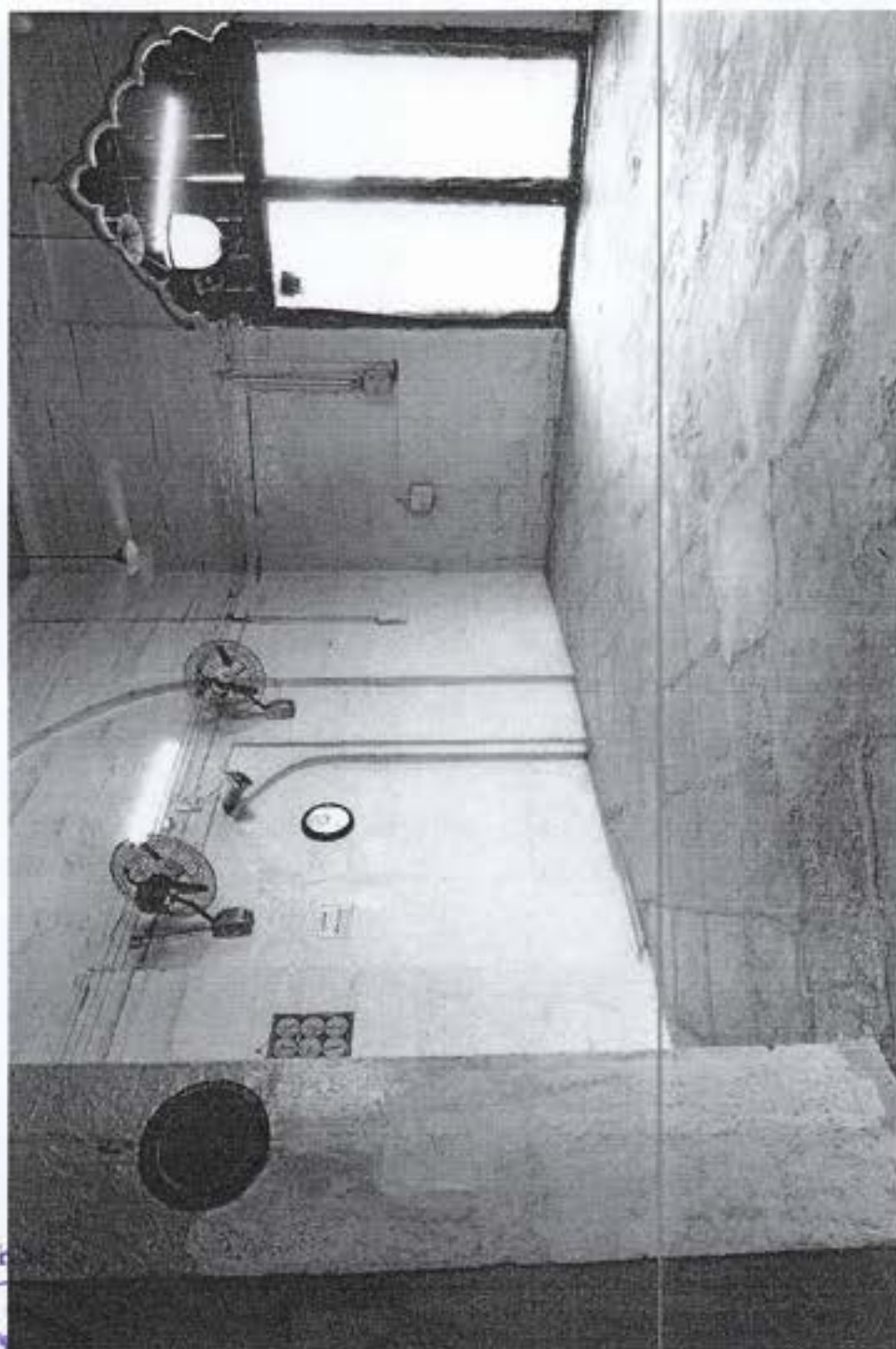
$$\begin{array}{r} 4045 \\ \hline 724 \end{array}$$


North Hall: False arch in western wall



404-5T
725

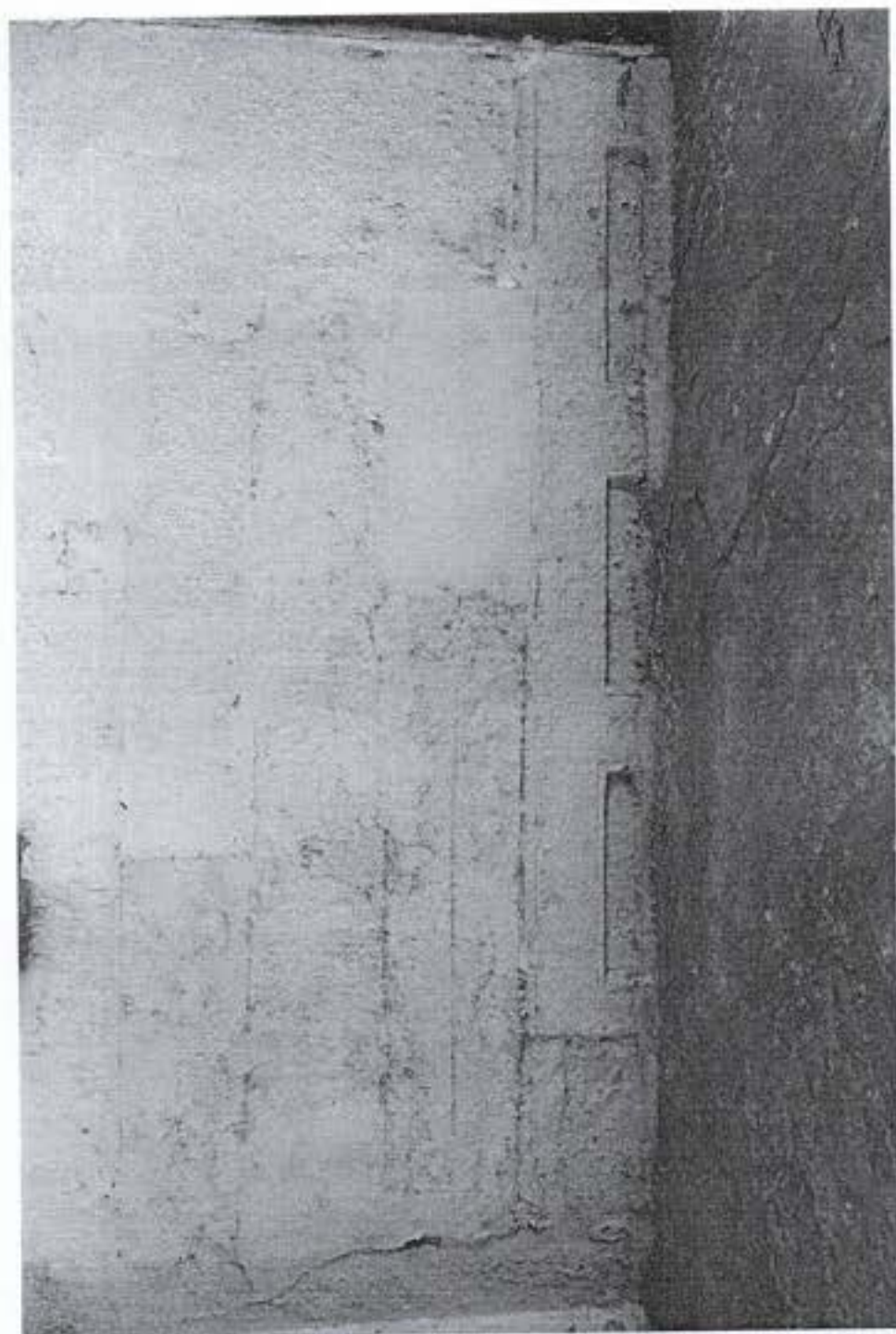
125



North Hall: Northwest corner



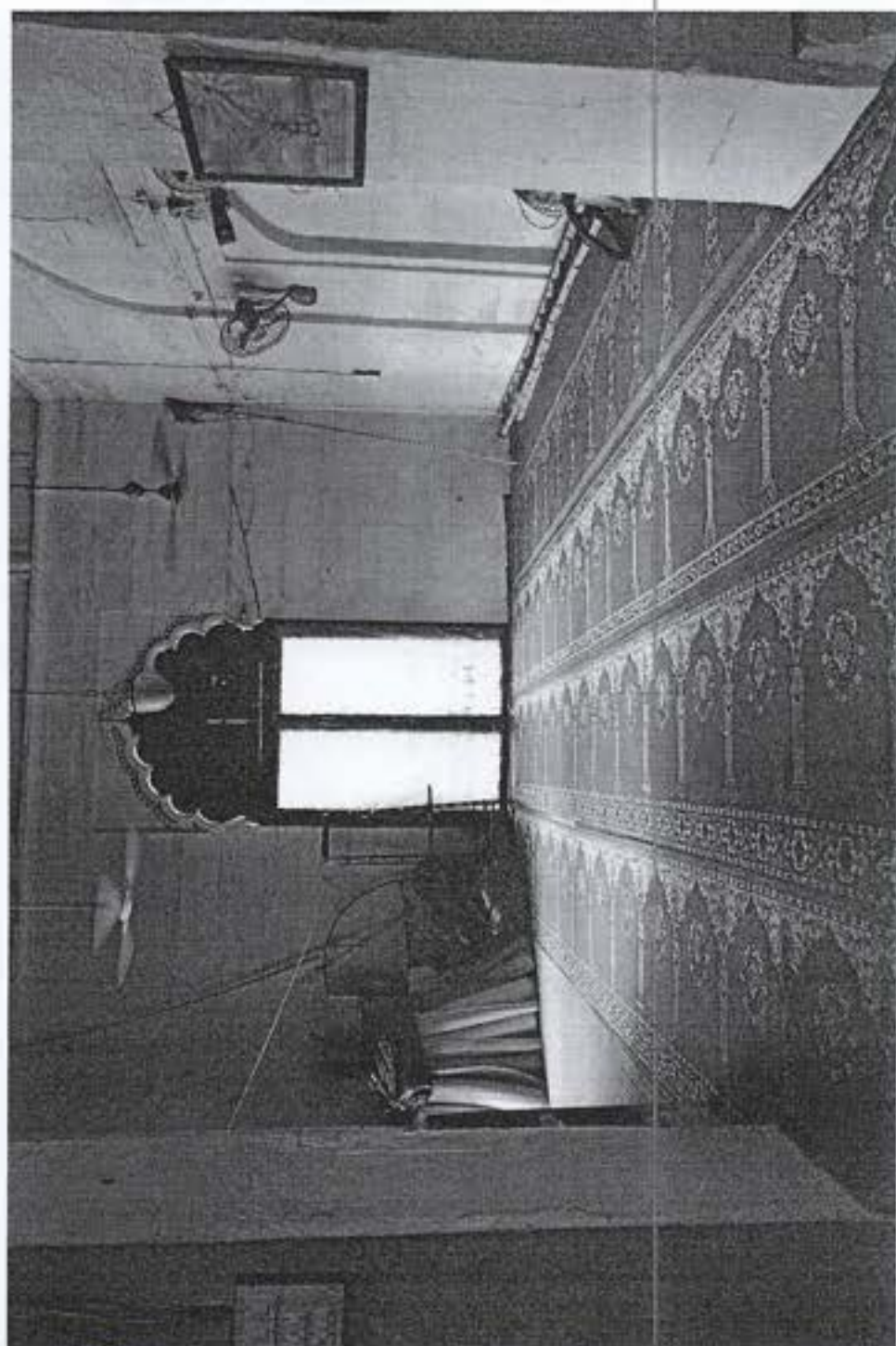
4045T
726



North Hall: Reused architectural member in northern wall



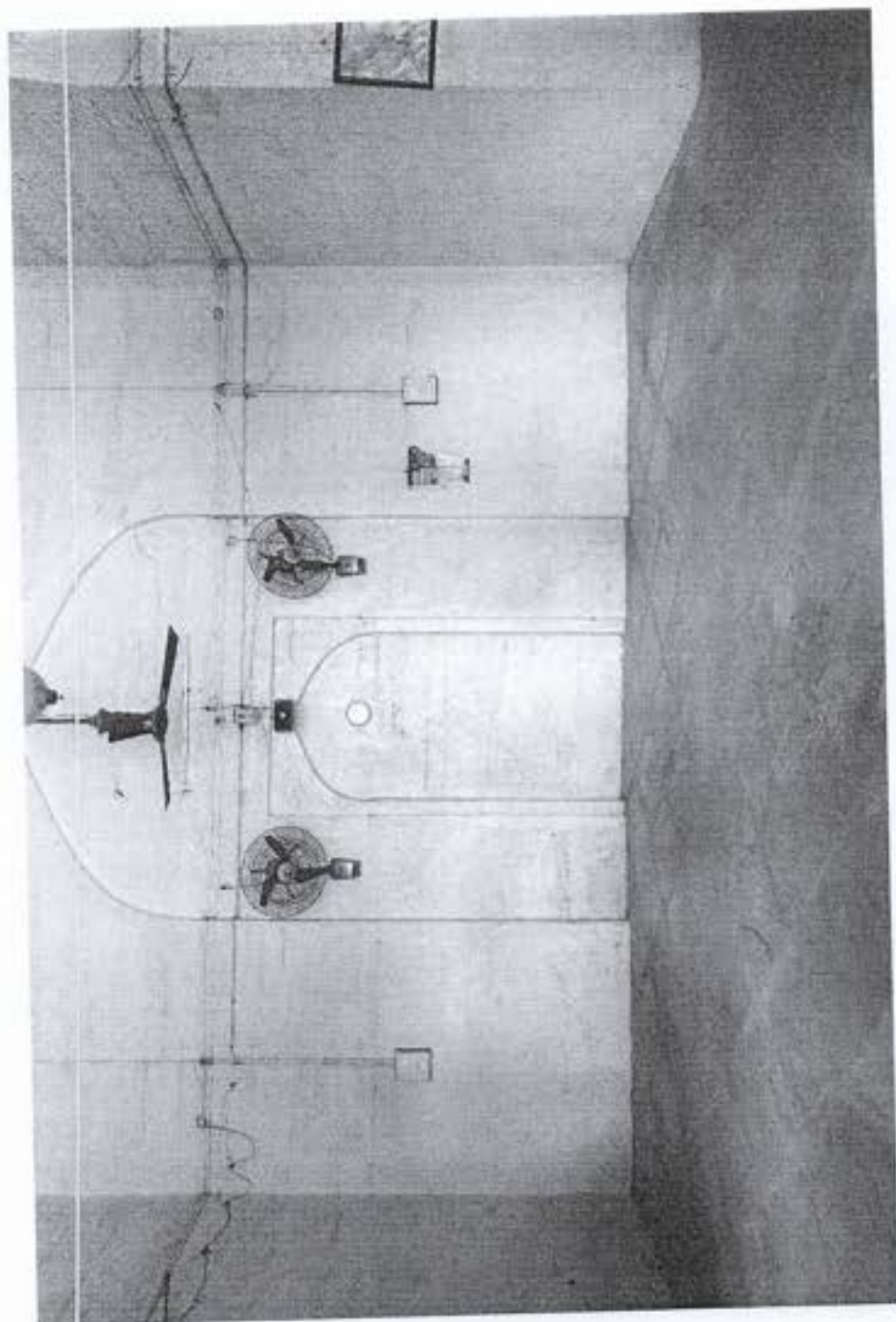
404-5T
727



South Hall: View from central hall



4045
728

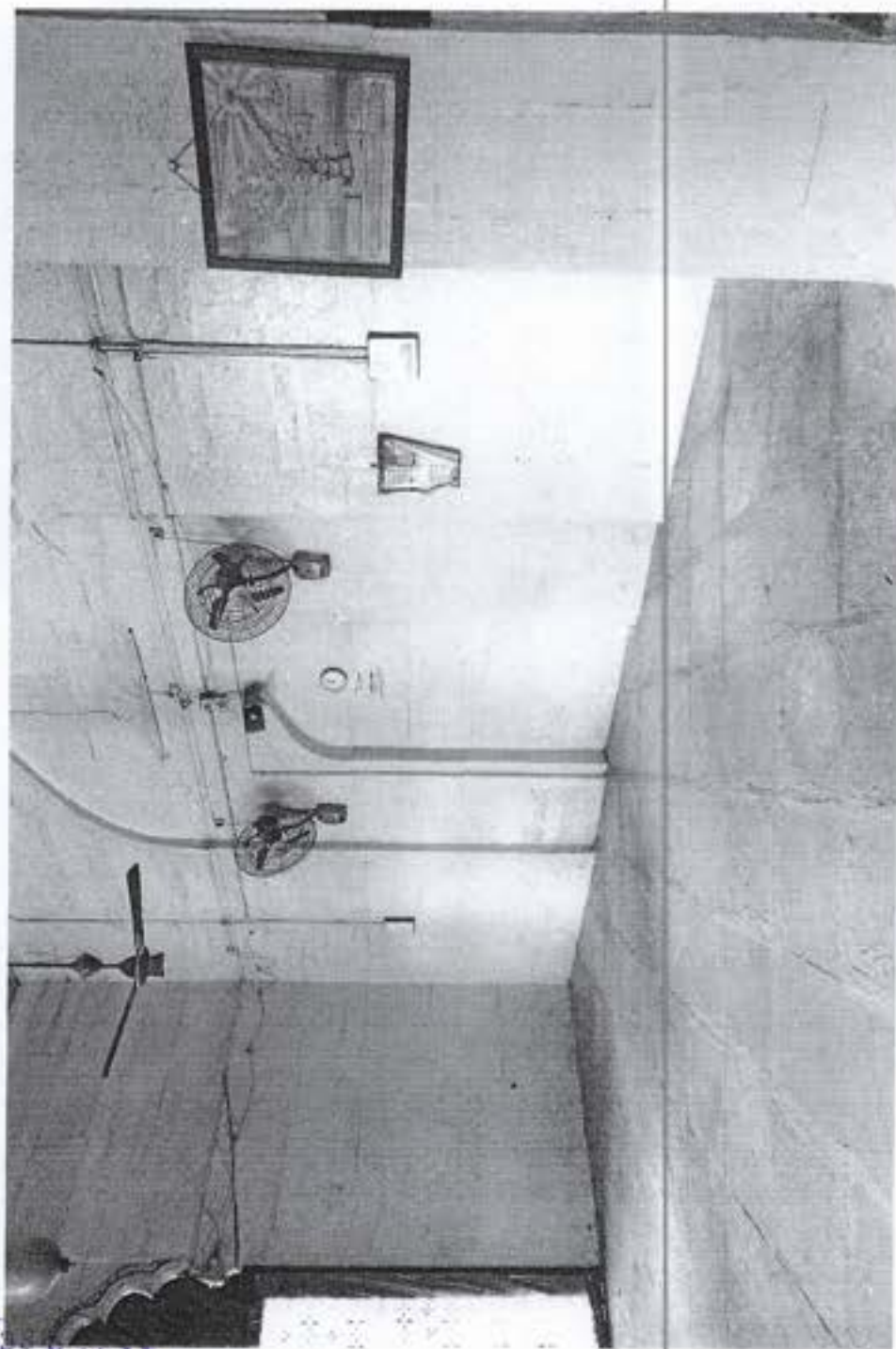


South Hall: False arch in western wall



404-5T
729

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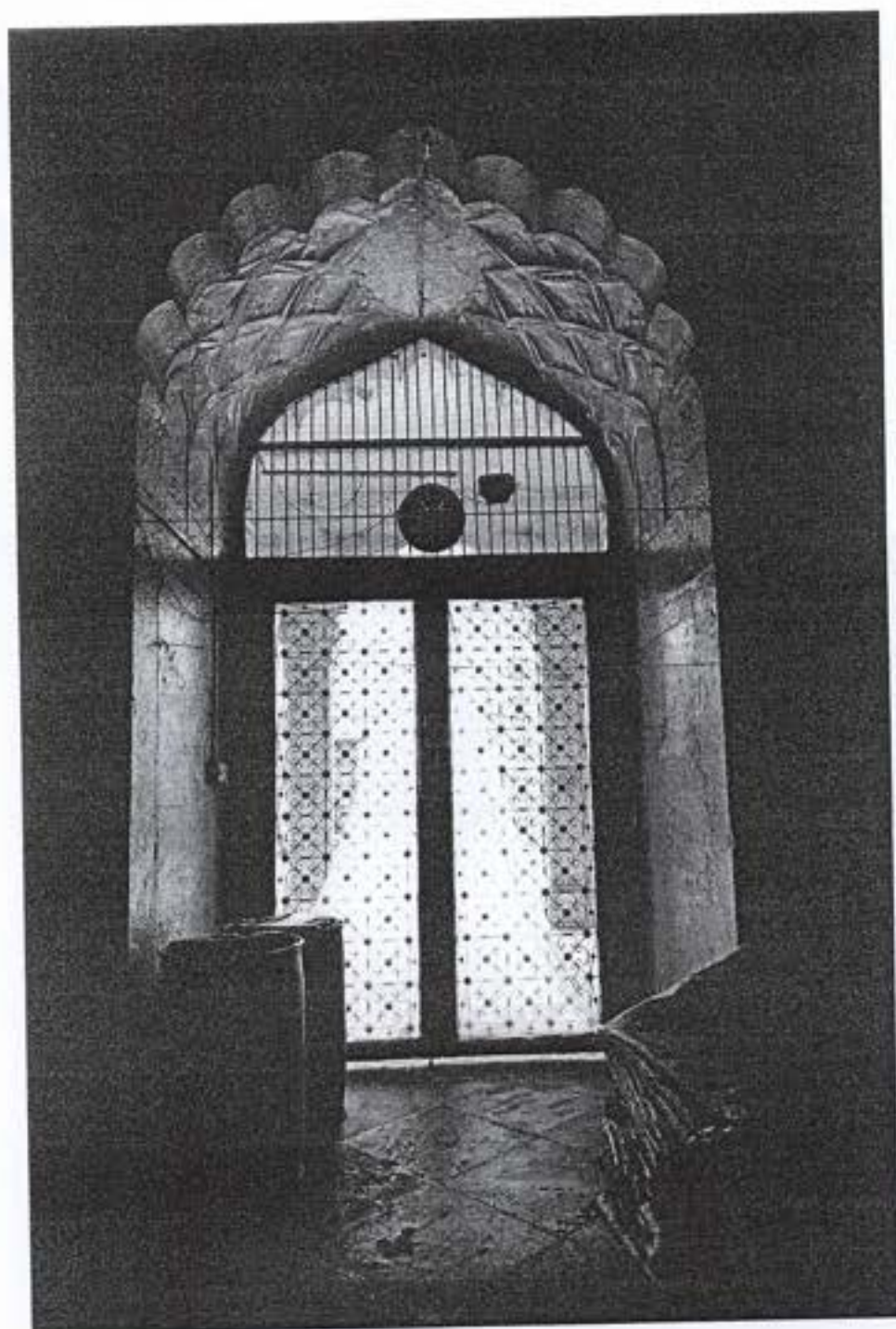


South Hall: Southwest corner



4045
730

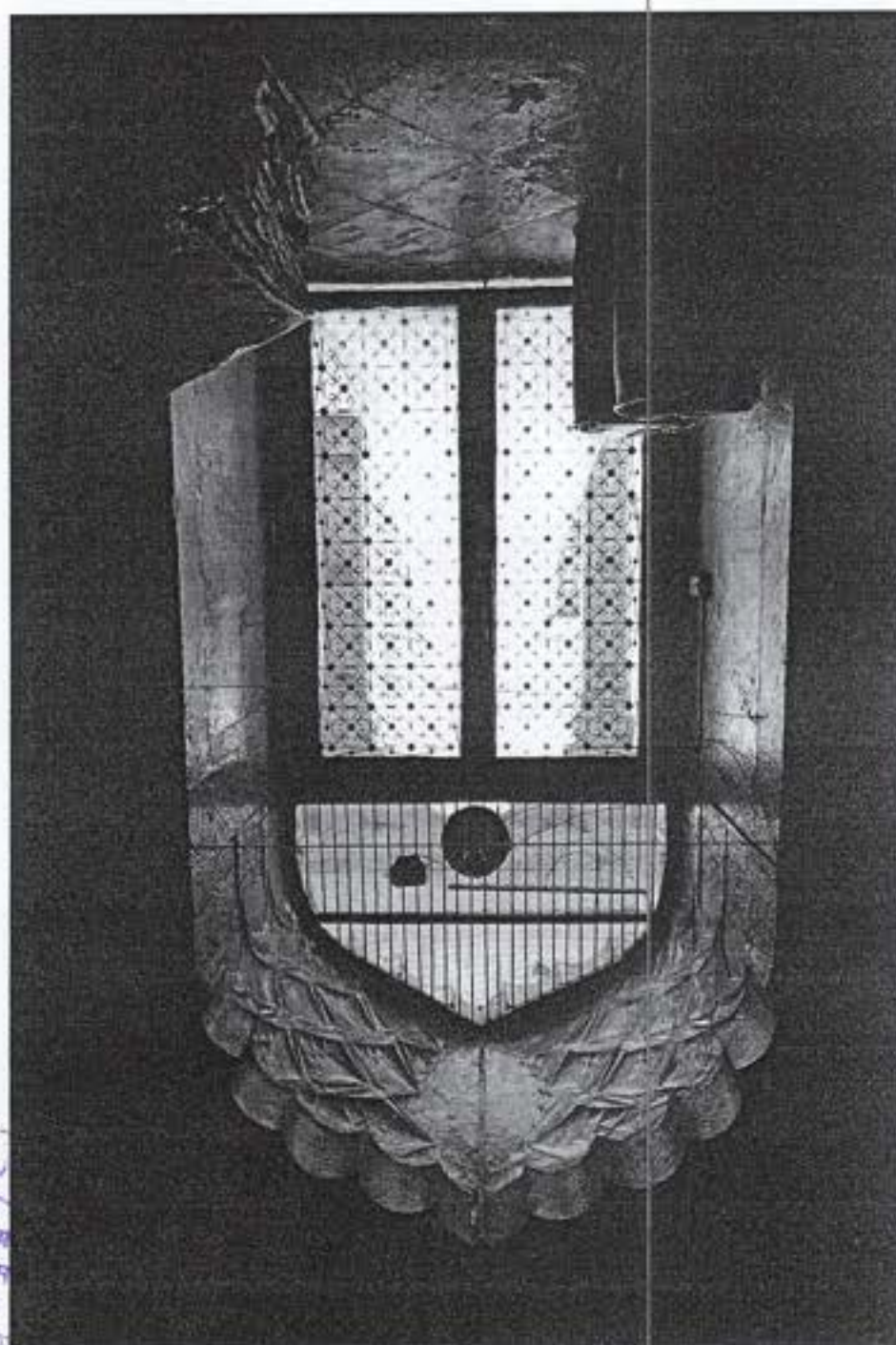
130



South Hall: Eastern entrance



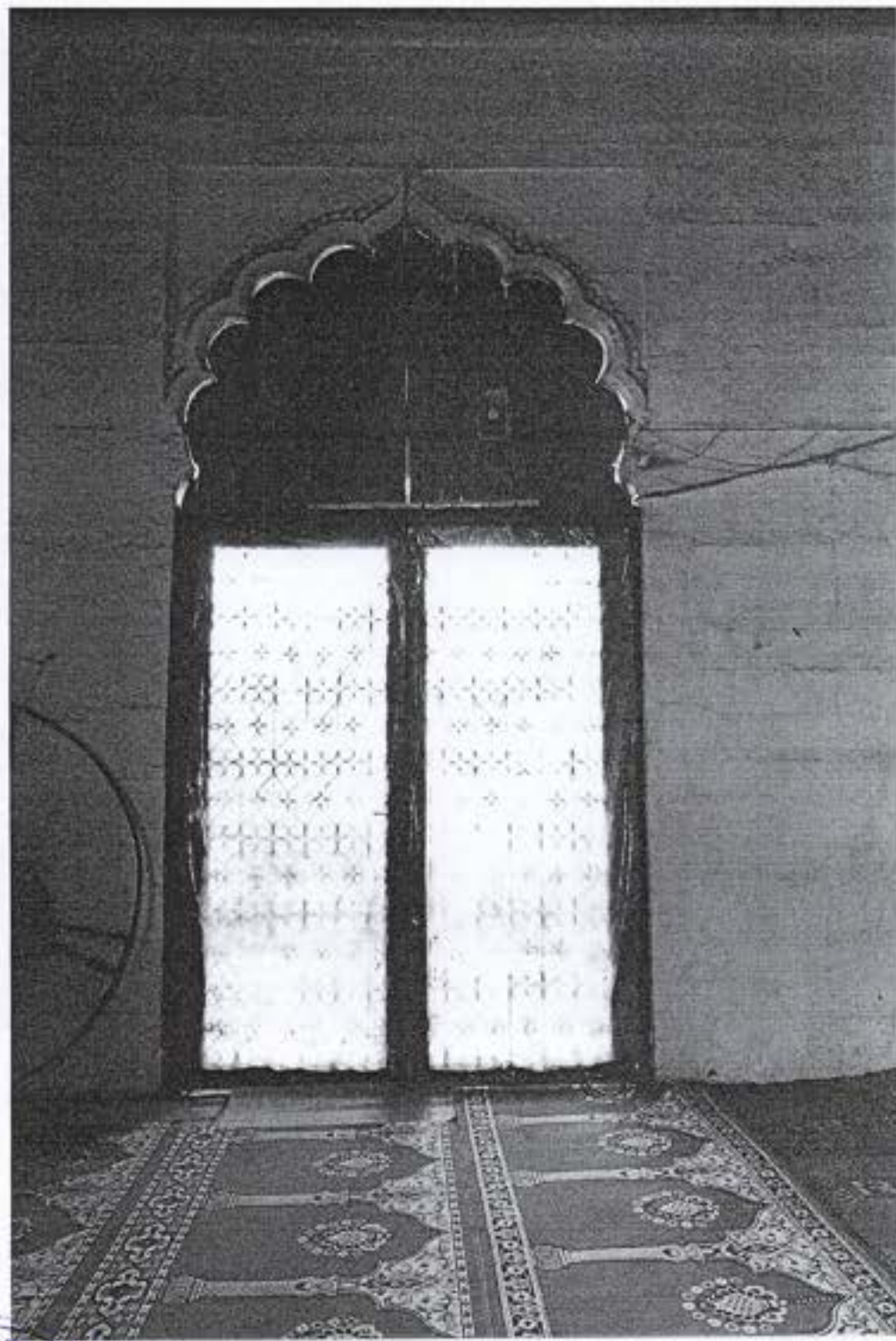
South Hall: Eastern entrance



4045
730

404 51
731

131

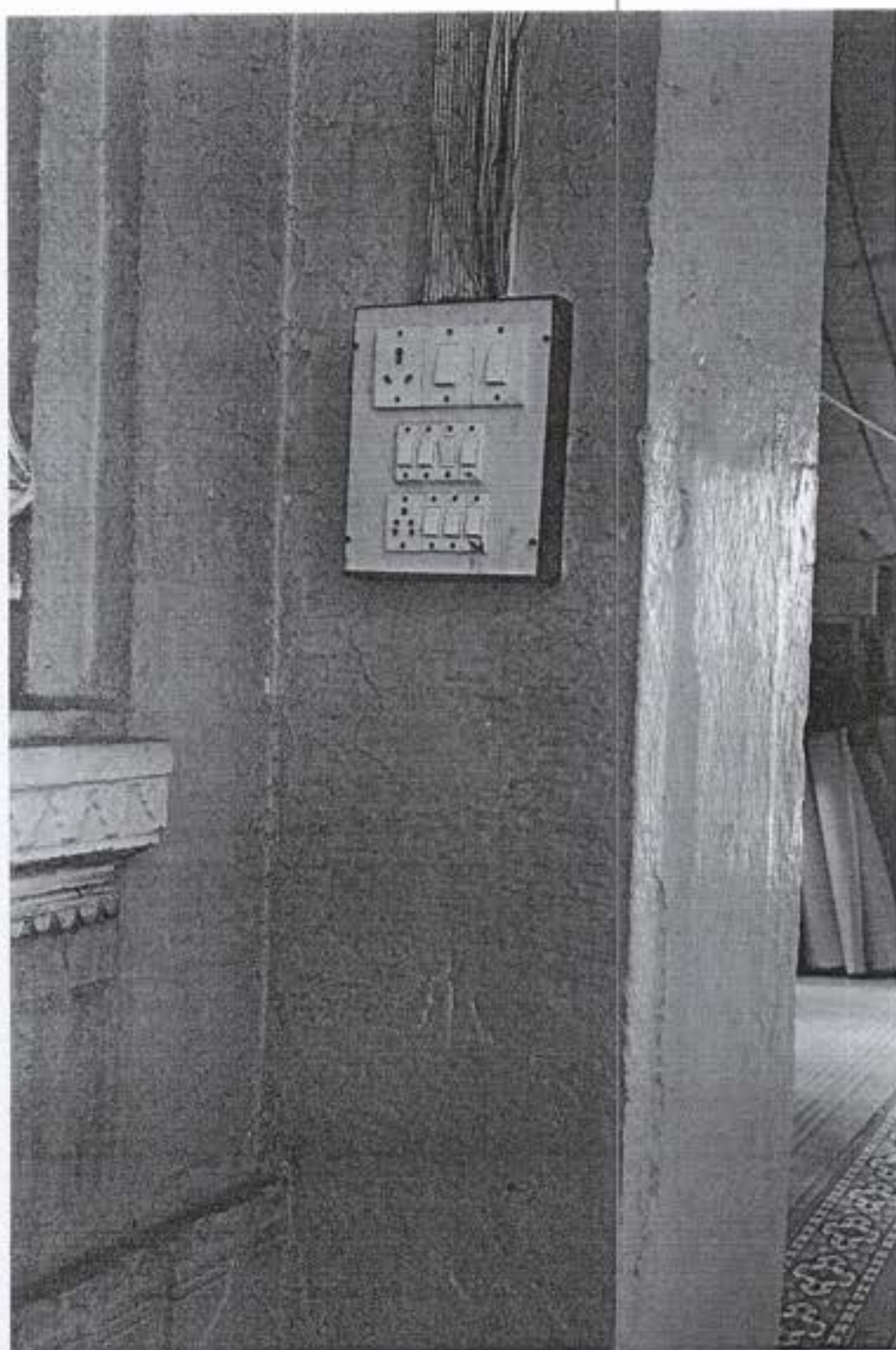


South Hall: Southern entrance



404J
732

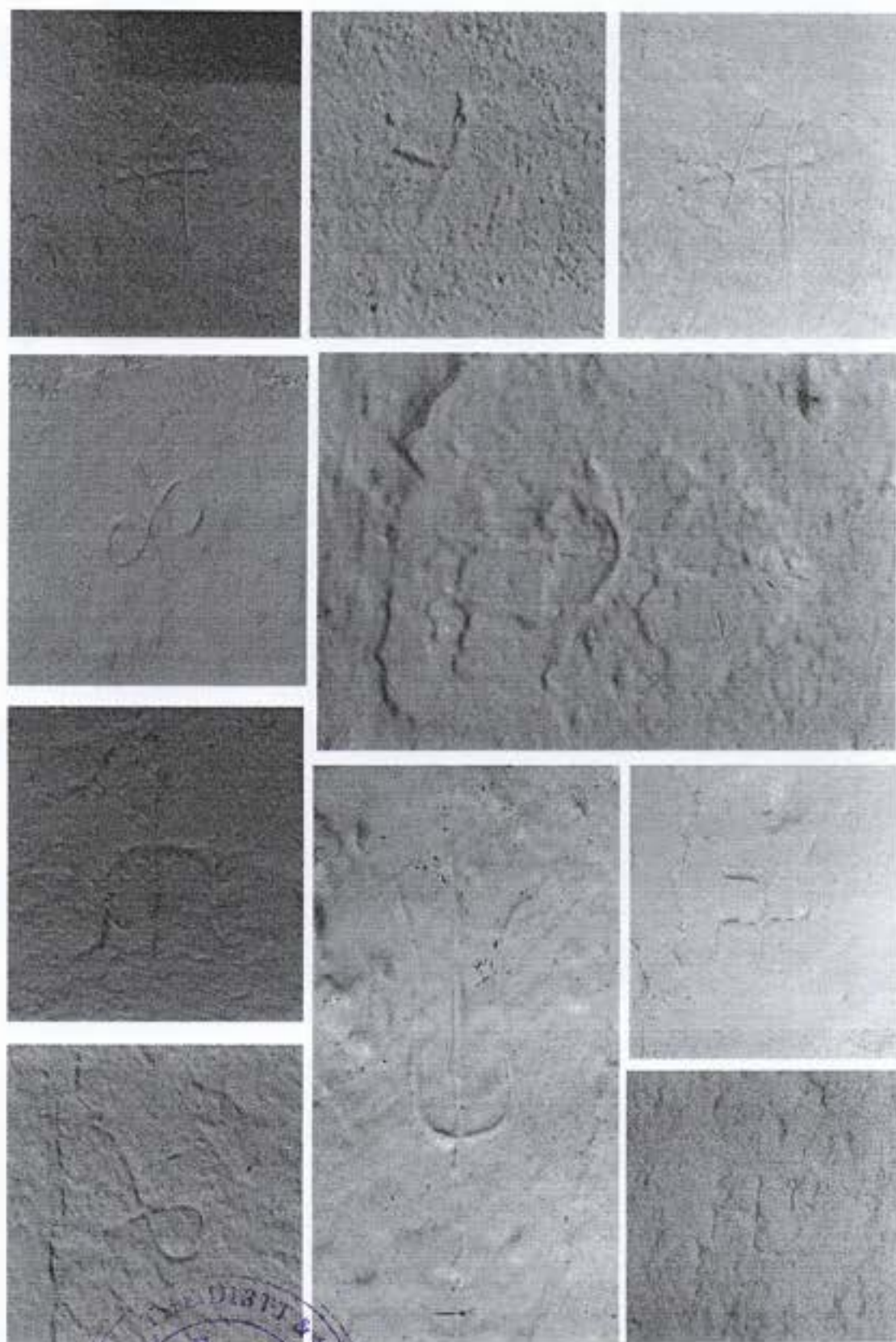
132



Existing Structure: Mason's mark on inner wall



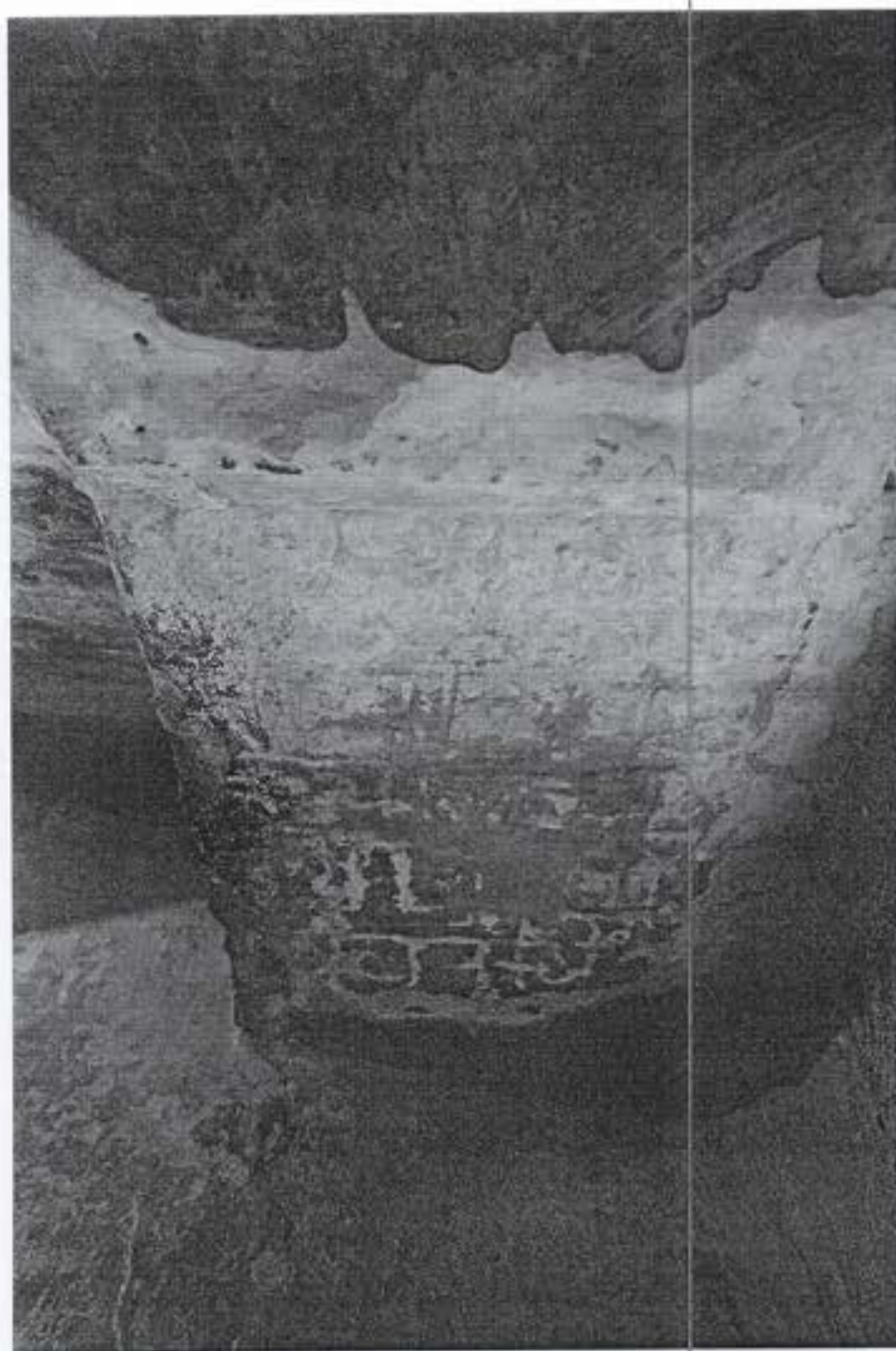
404-51
733



Mason's Marks: On inner walls



4047
734



Minaret: Inscription on steps





Southern Stairs: Inscription

404-5T
735



4045
736

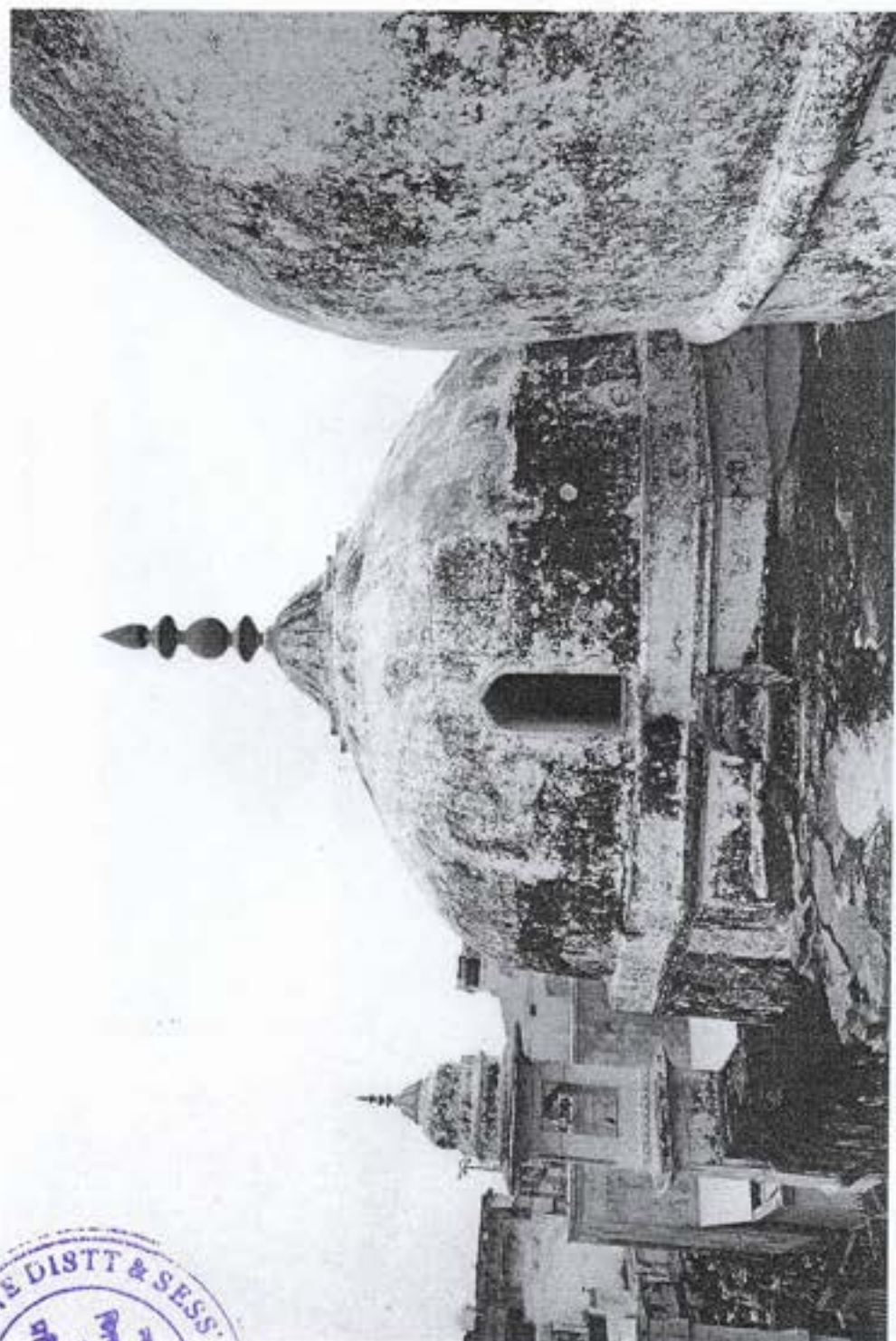
136



Southern Stairs: Inscription



40451
737

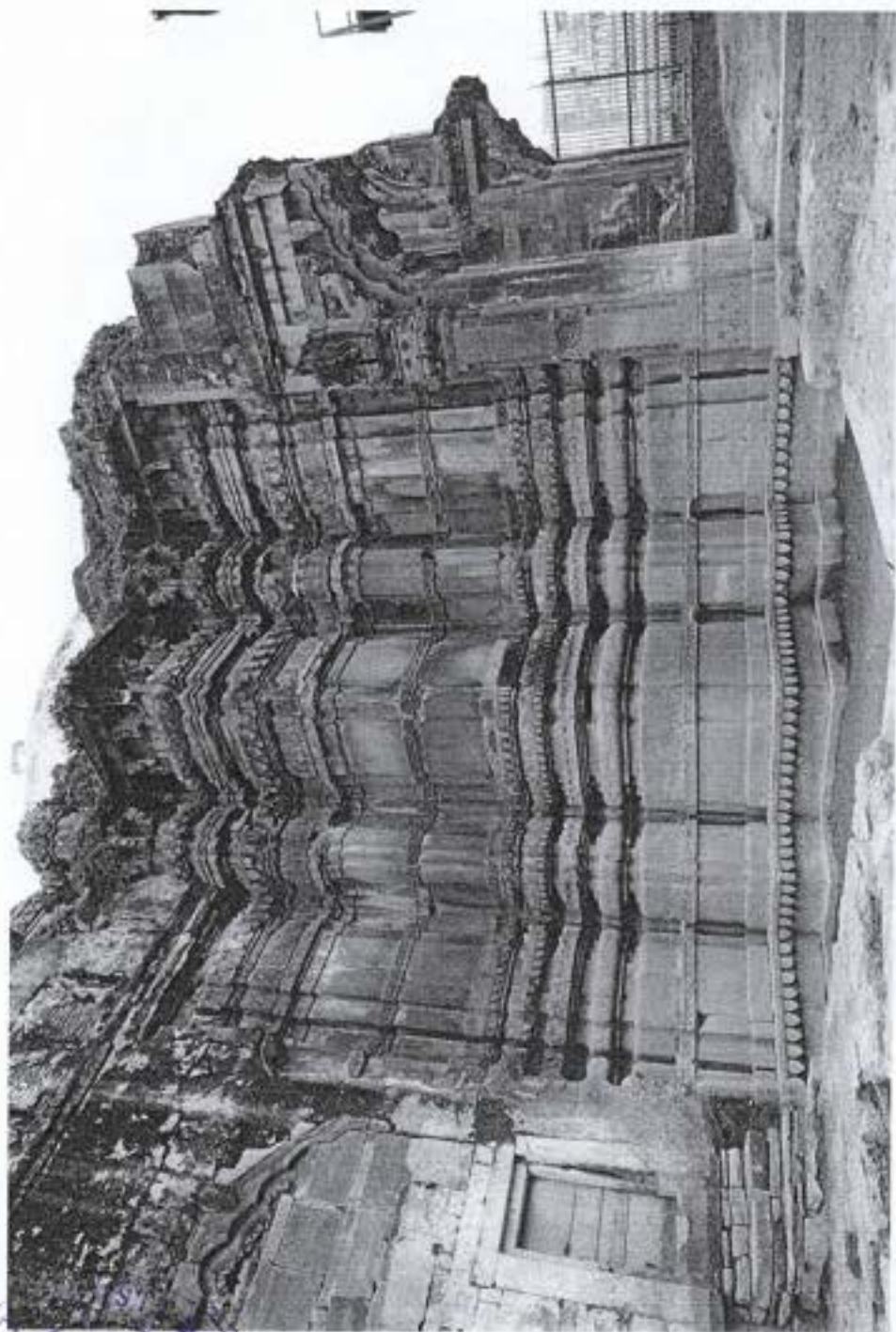


Existing Structure: Domes



Minarets above main entrance

4045T
738



Northwest corner of pre-existing structure

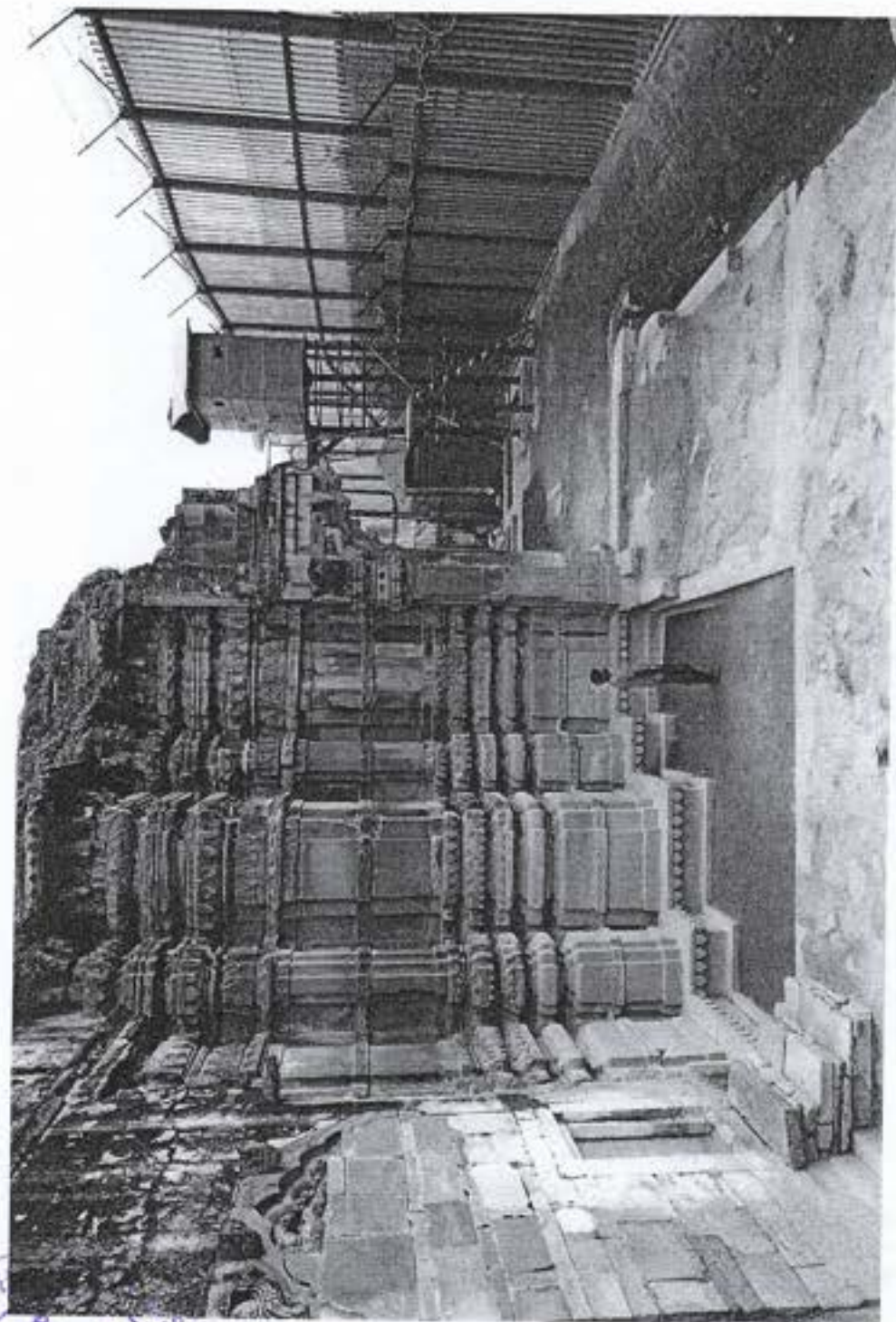
4047
739

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740



Western Chamber: Northern wall with arched gateway

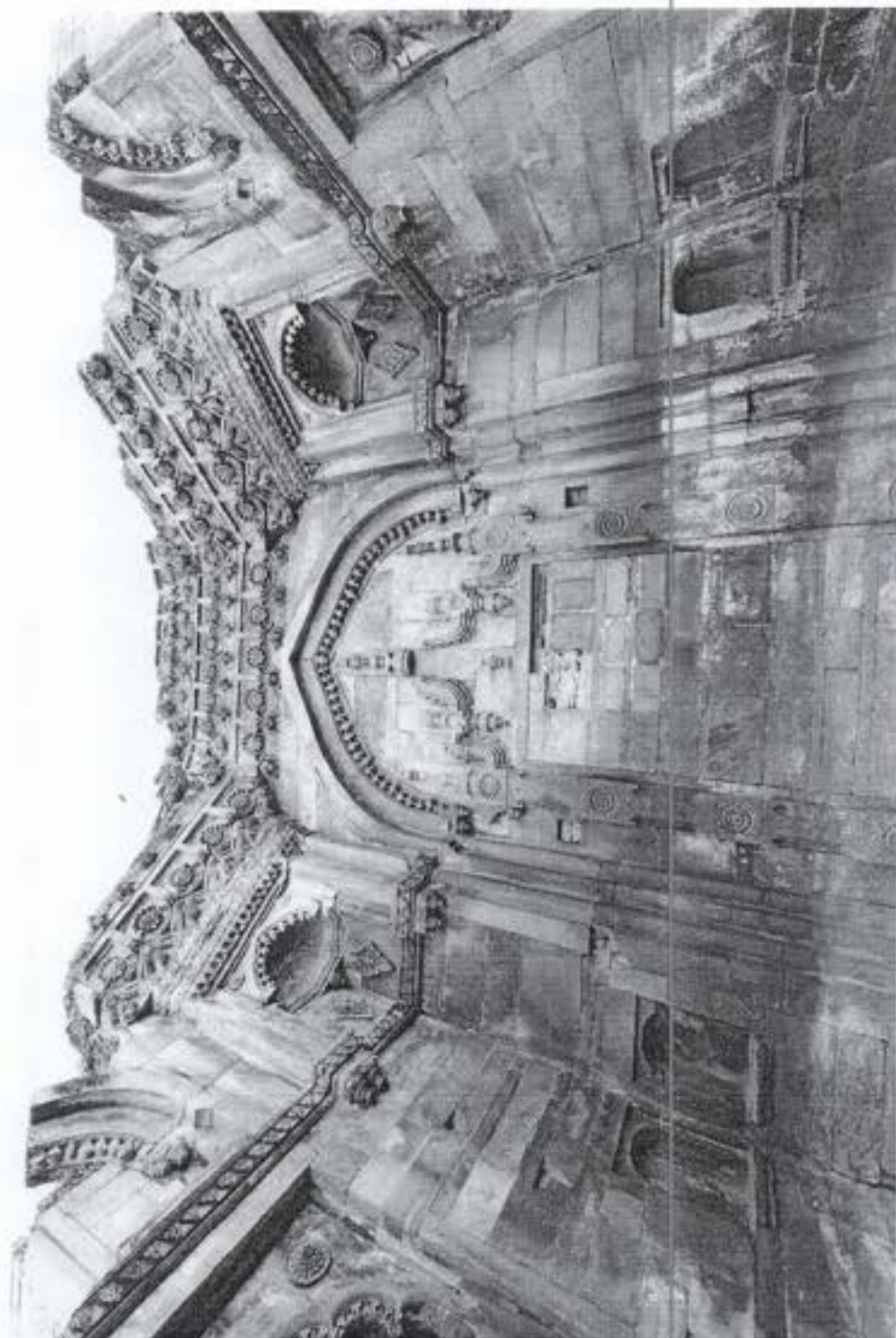




Western Chamber: Exposed structure in front of arched gateway

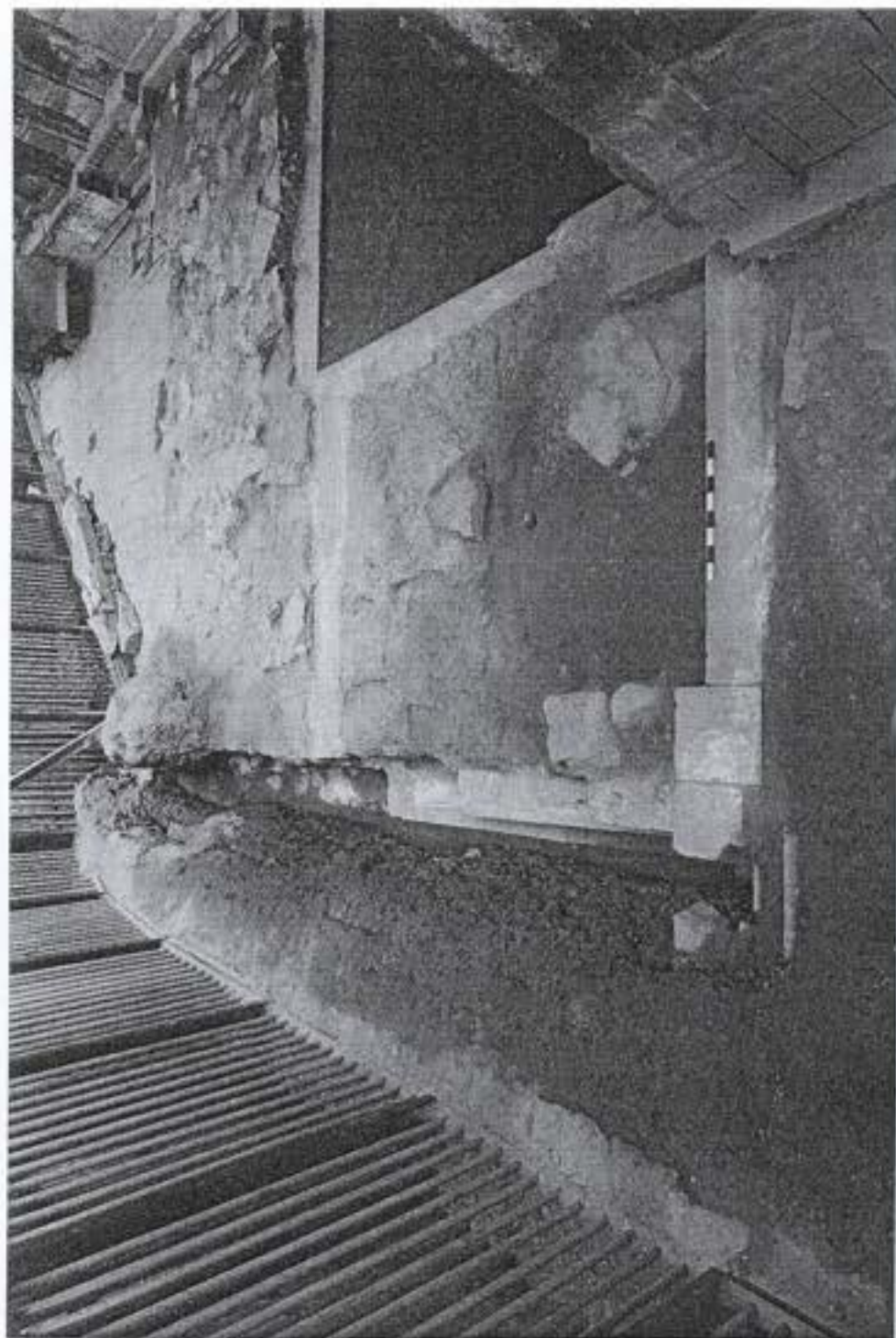
4045T
741

4047
742



Western Chamber: Main entrance to central hall





Northwest Side: Structure connecting western chamber with north hall

404-7T
743

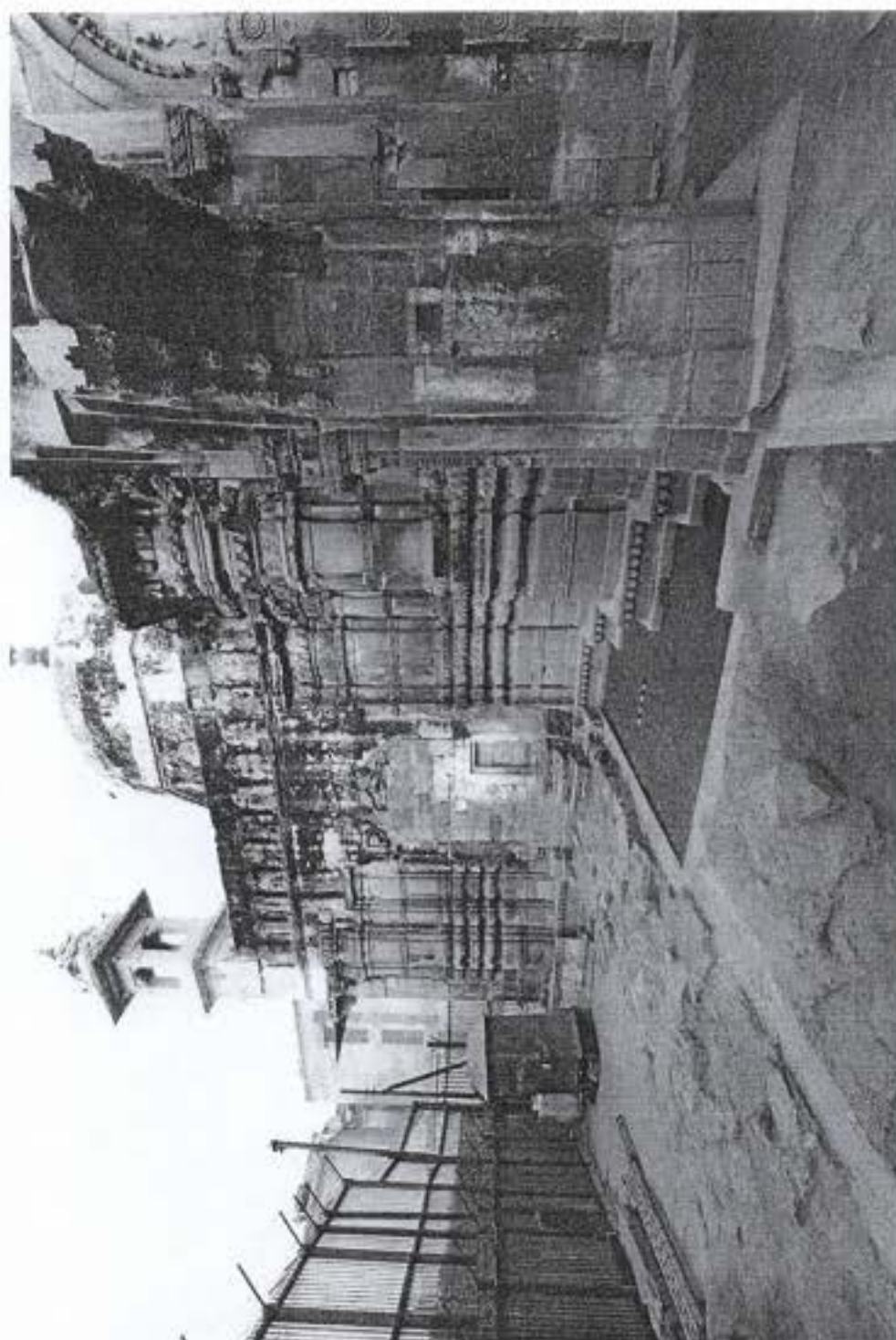


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744

Northwest Side: Exposed structures

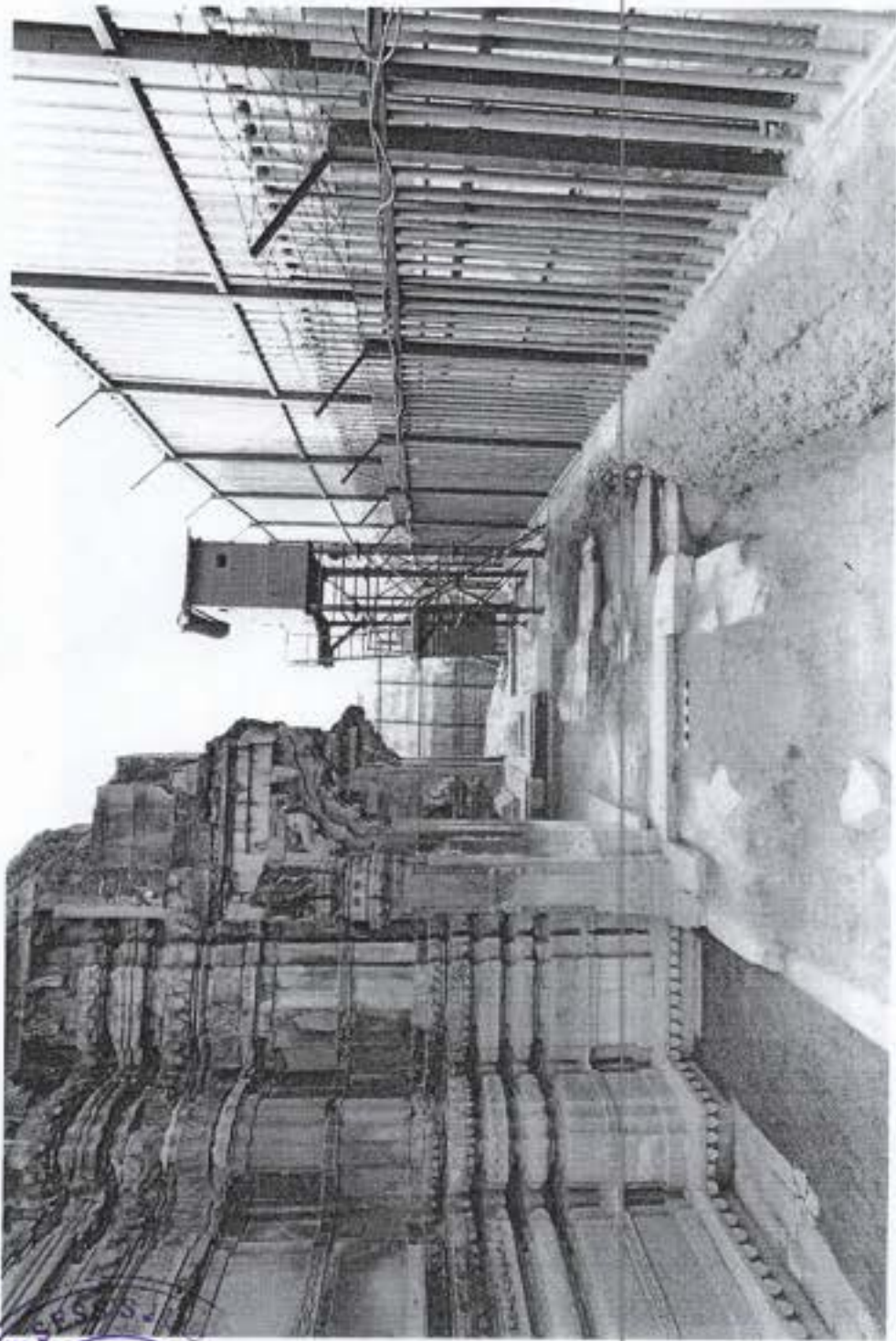


4047
745



Northwest Side: General view of exposed structures



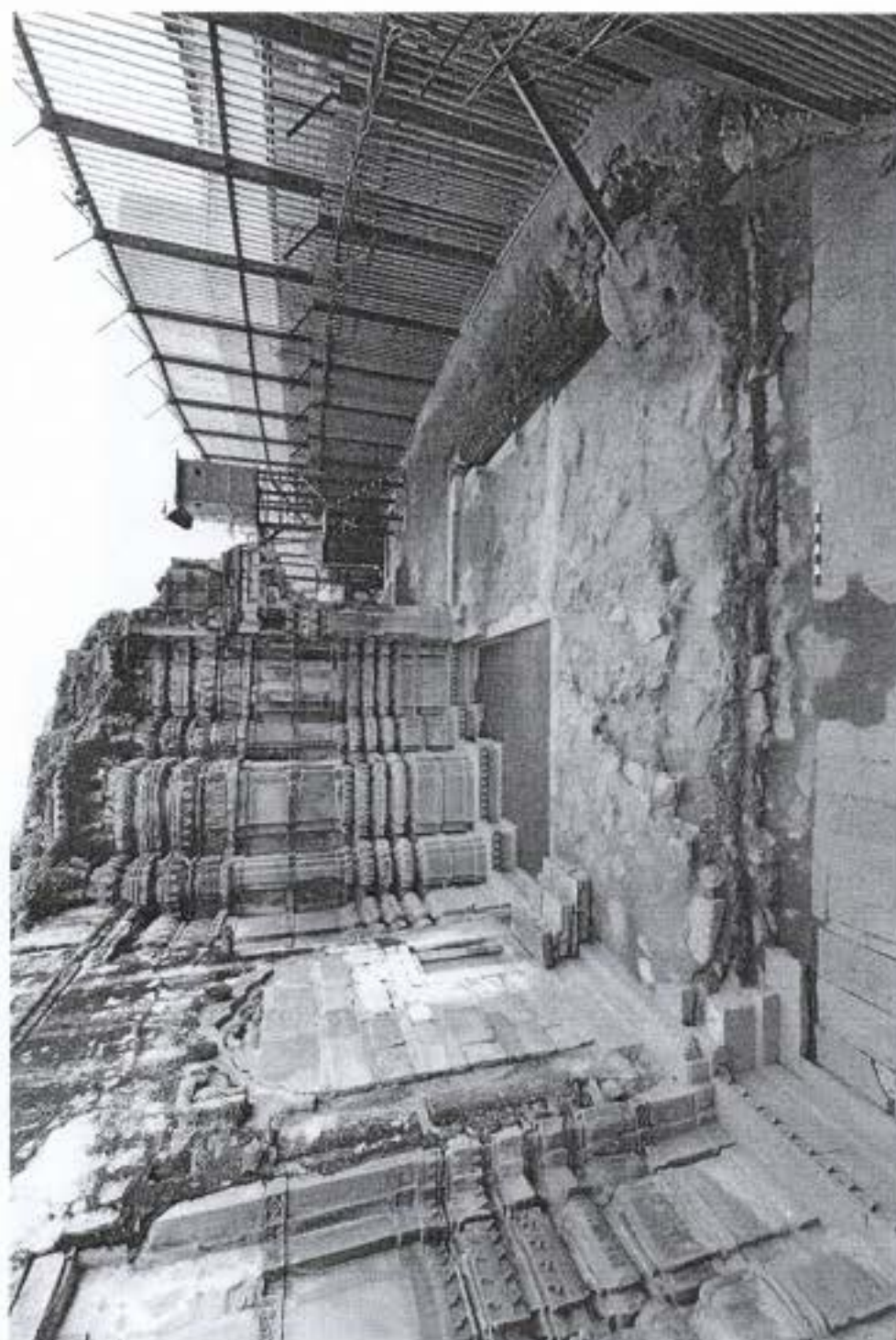


Western Wall: General view of exposed structures

404-51
746

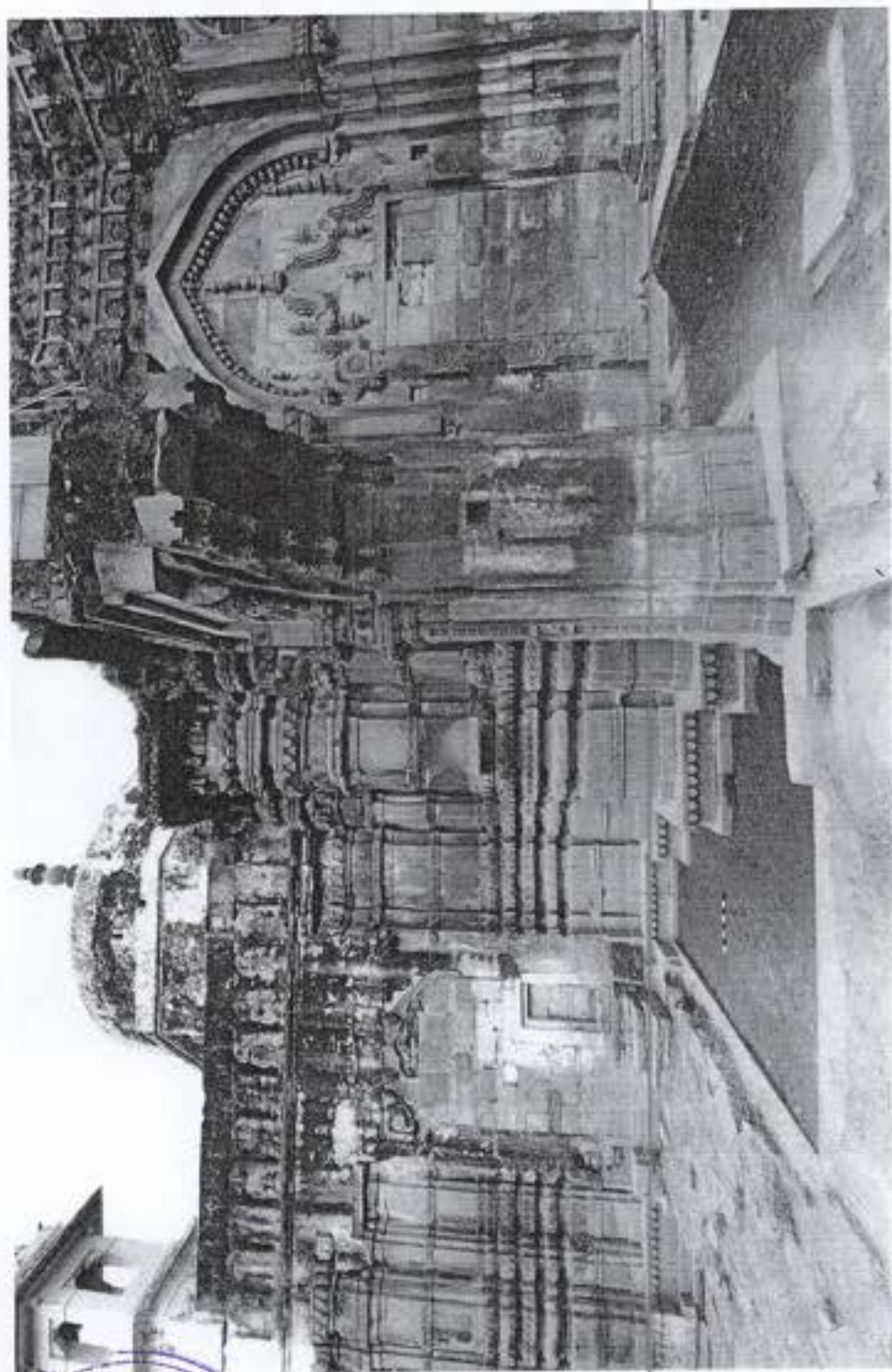
4045T
747

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Northwest Side: Exposed structures above existing floor level





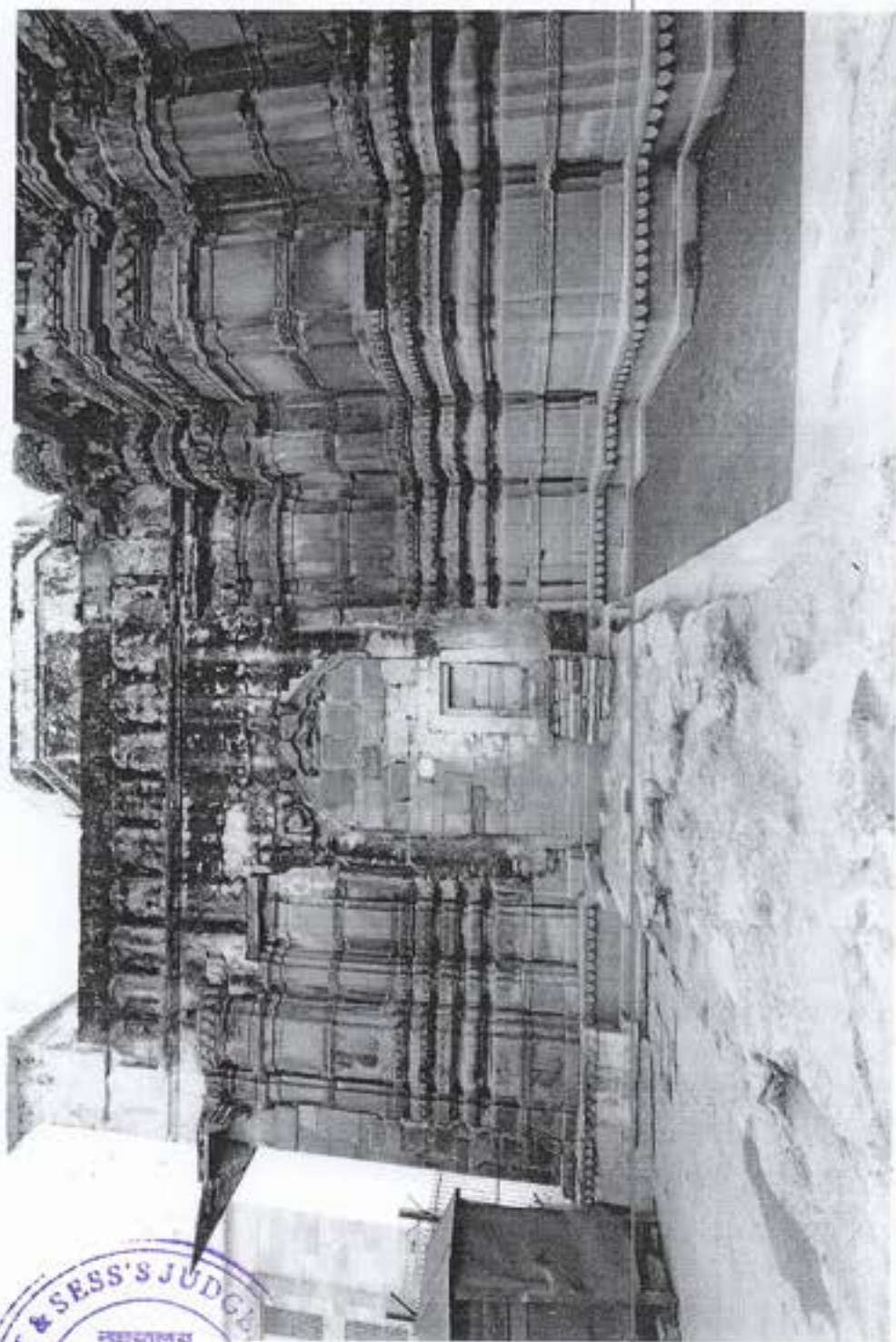
Western Wall: Northwest side and western chamber

404-5T
748



Southwest Side: General view

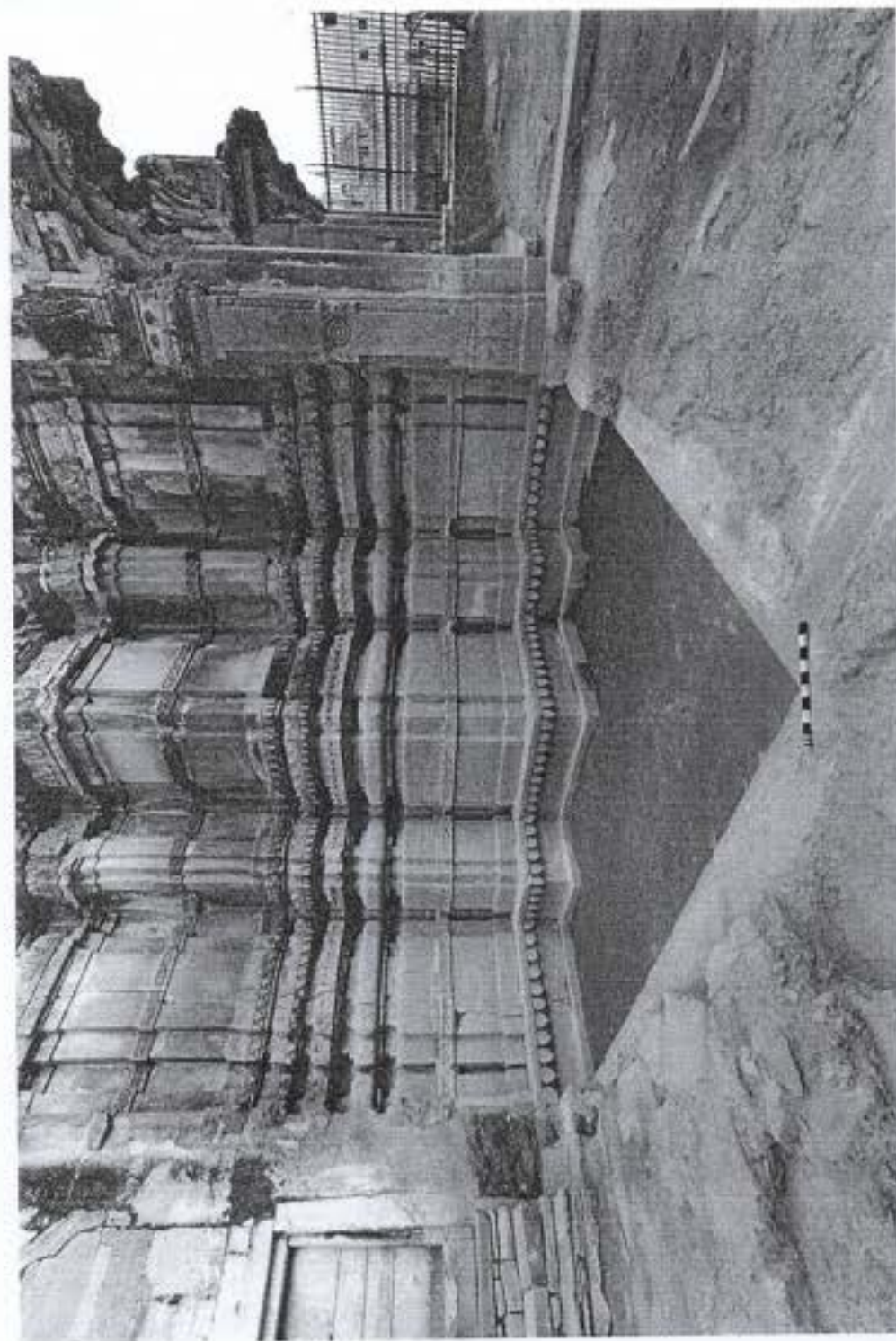
4045T
749



Northwest Side: Exposed structure in front of western entrance of north hall

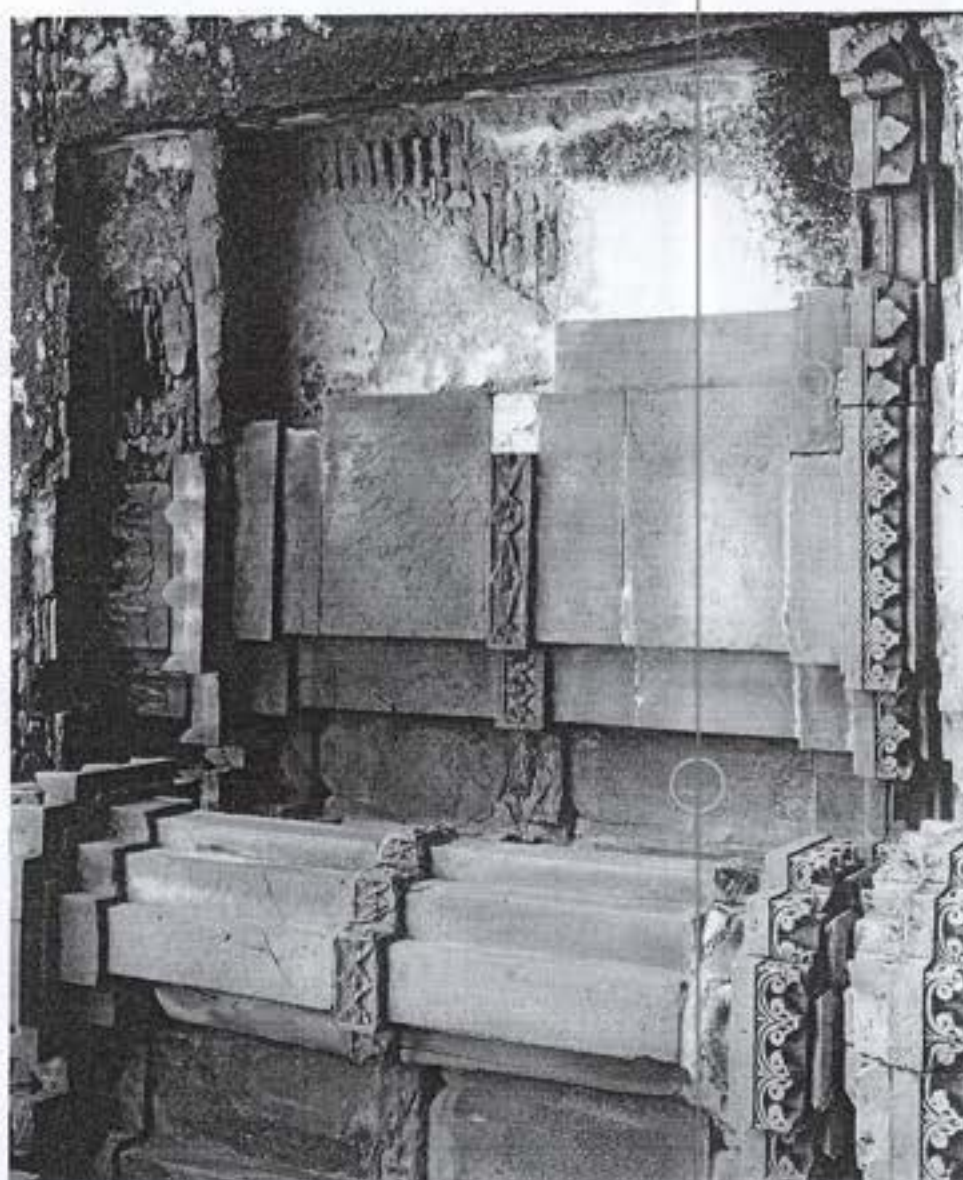
404-3T
750

751



Northwest corner of central hall with exposed plinth



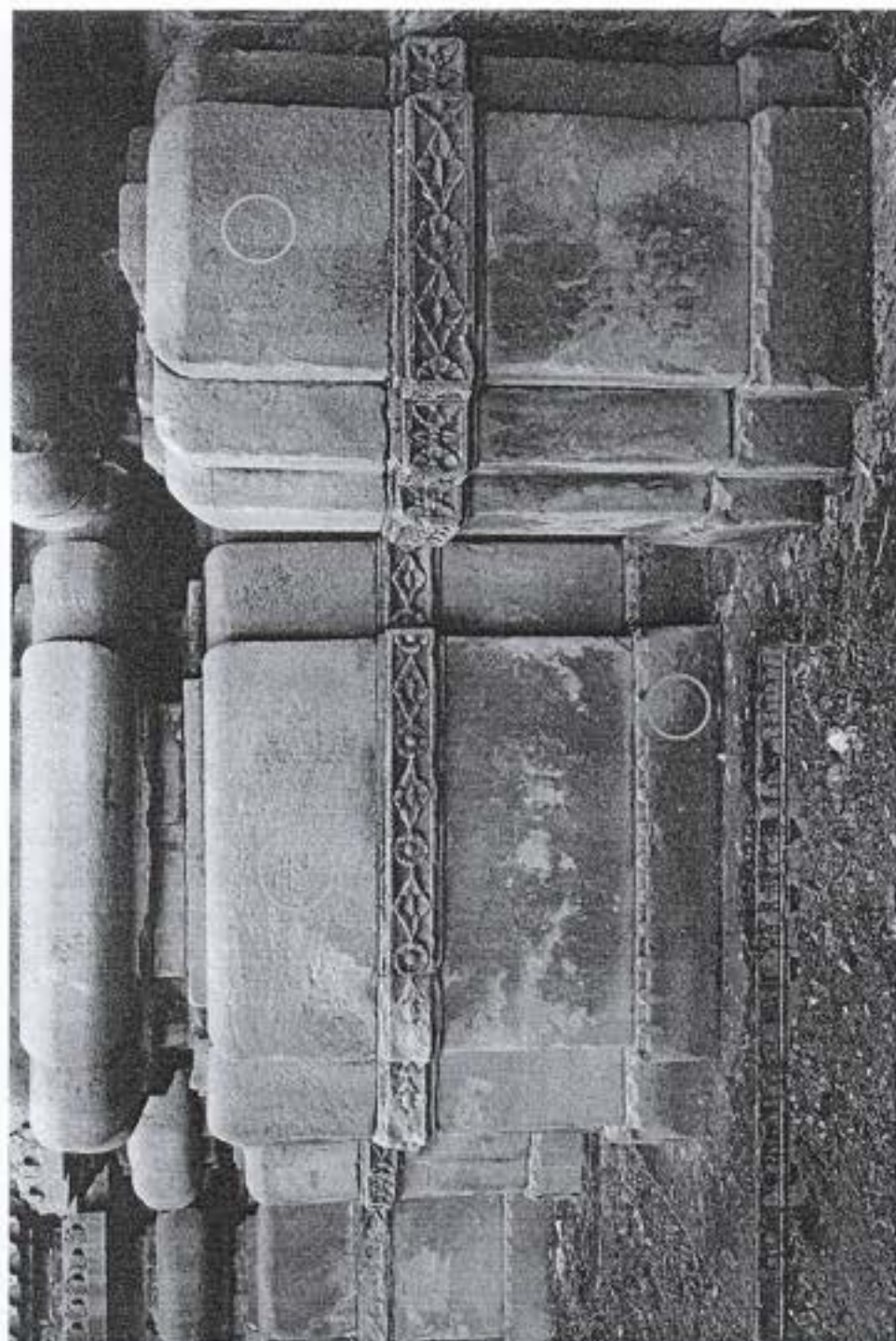


Western Wall: Double and single knot marks

404-51
752



4047
753

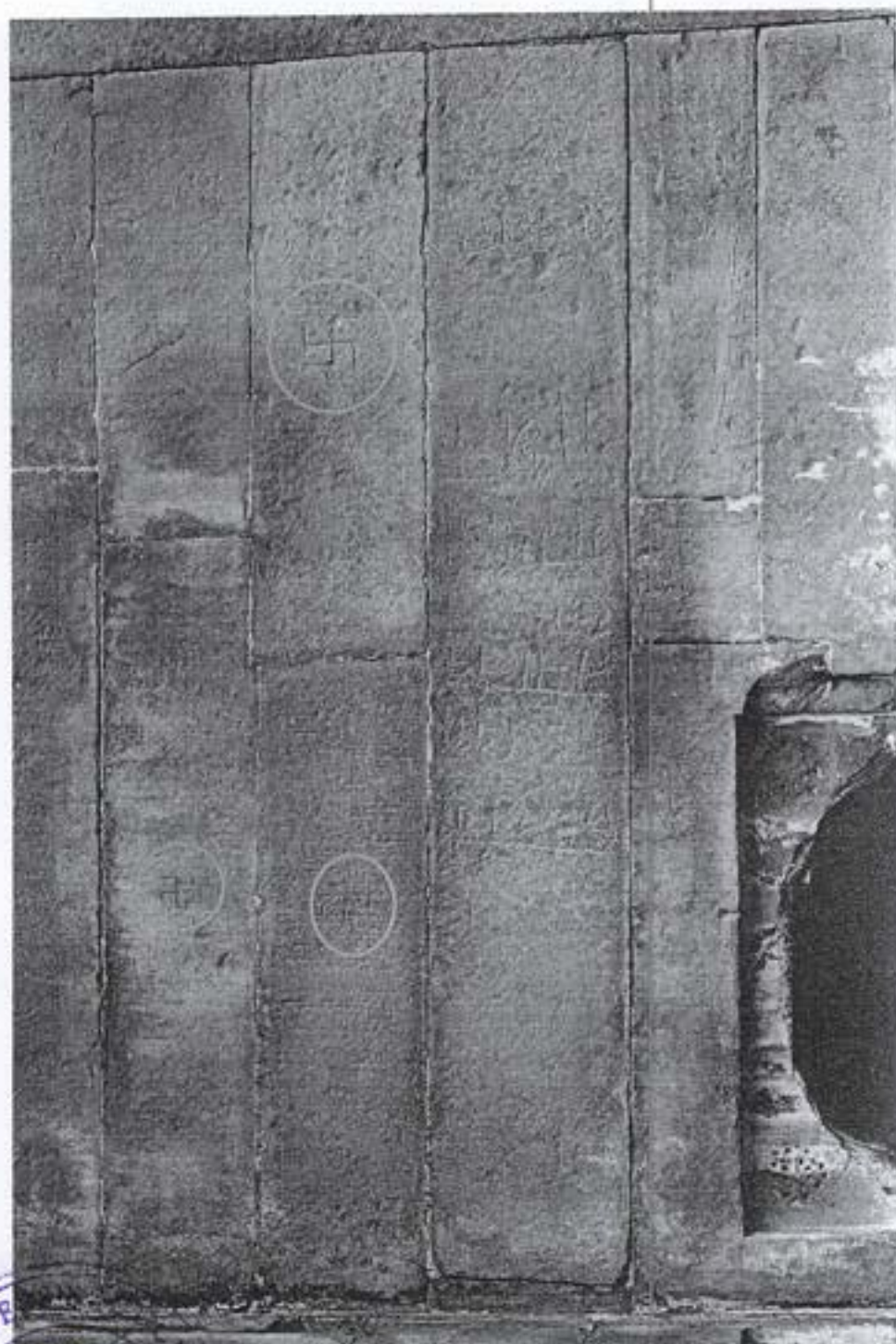


Western Wall: Swastik marks



4045T
754

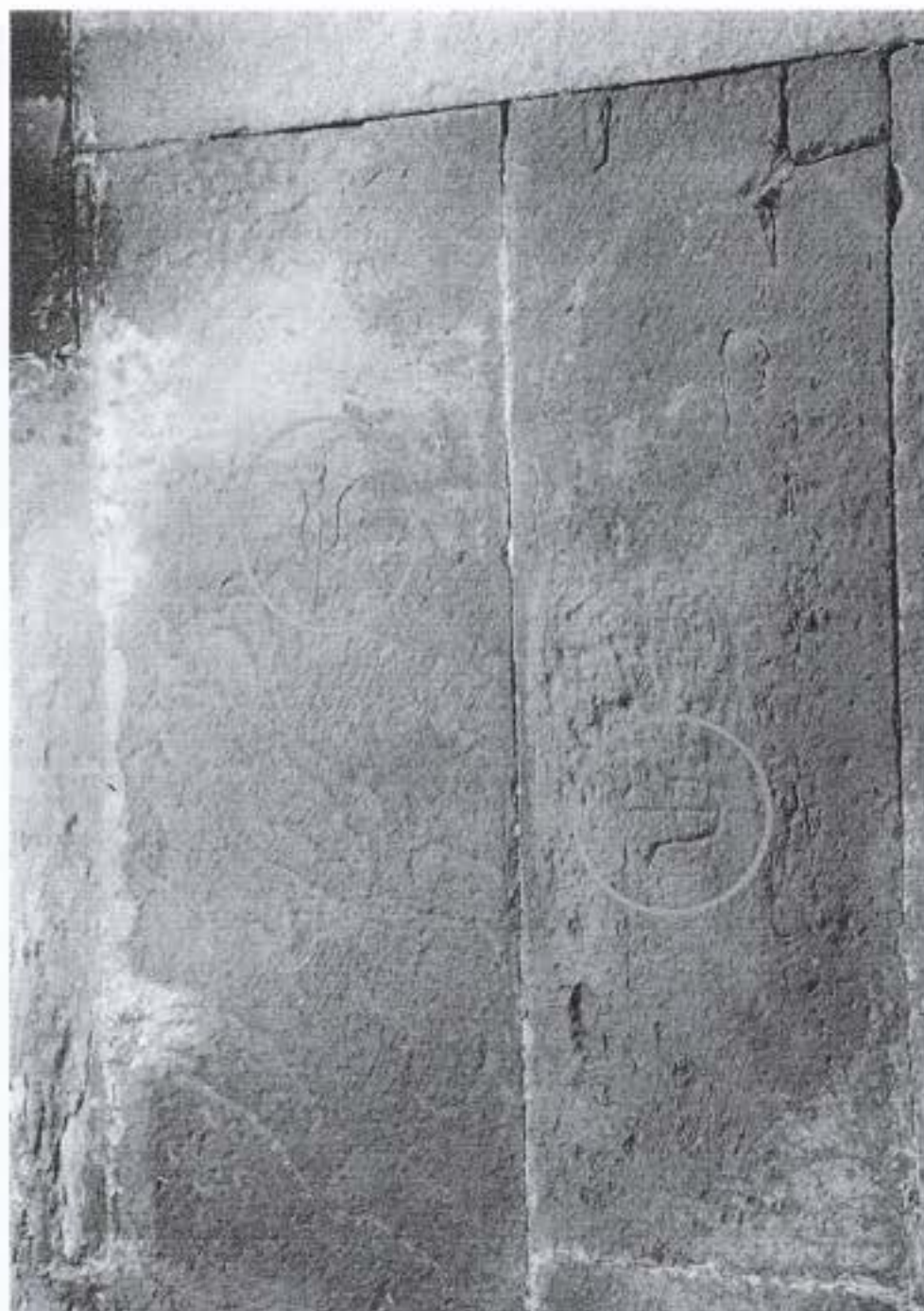
154



Western Wall: Swastik marks



404J
755

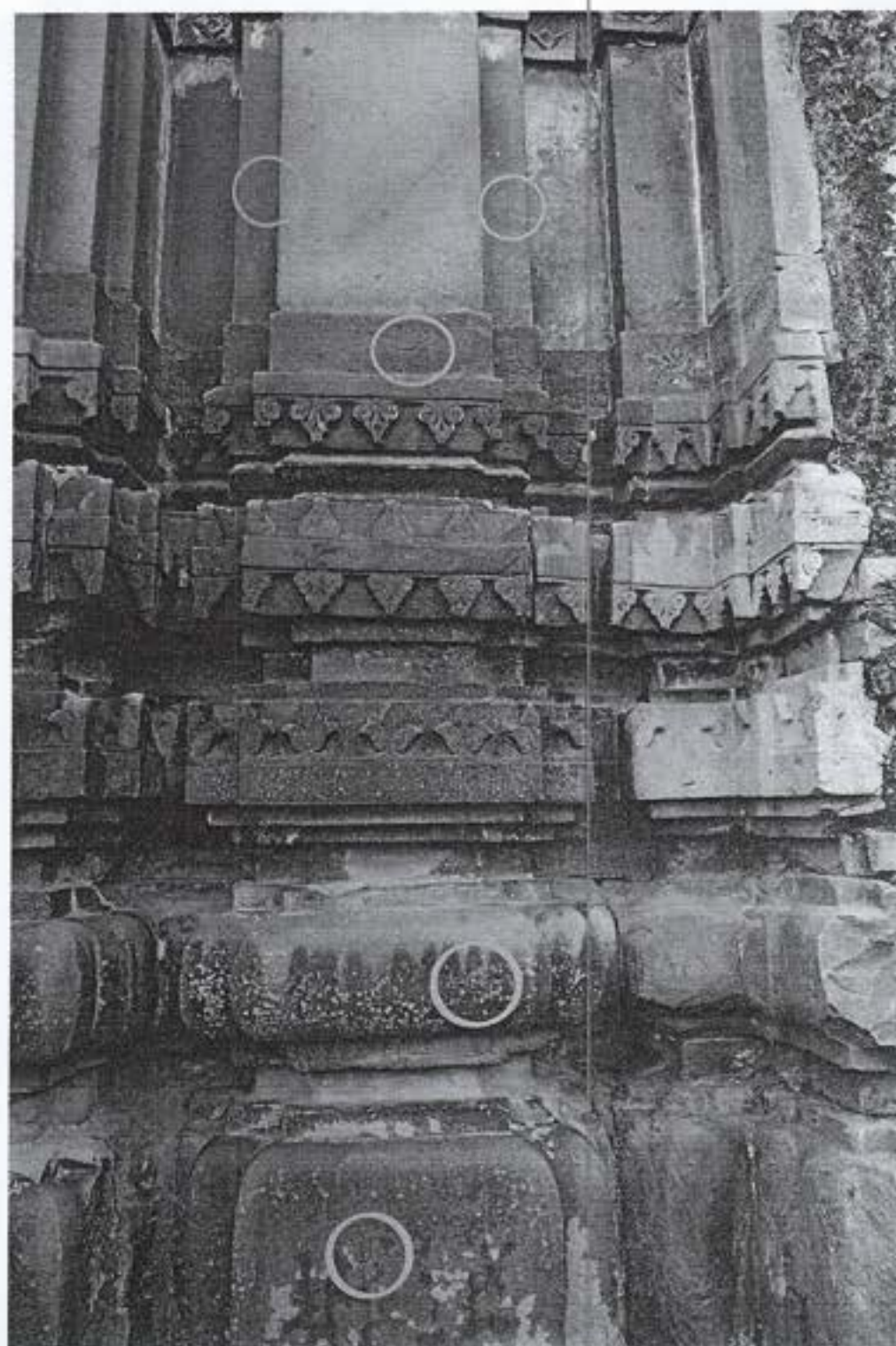


Western Wall: Trident marks



4047
756

156



Western Wall: Trident marks



404T
757

157

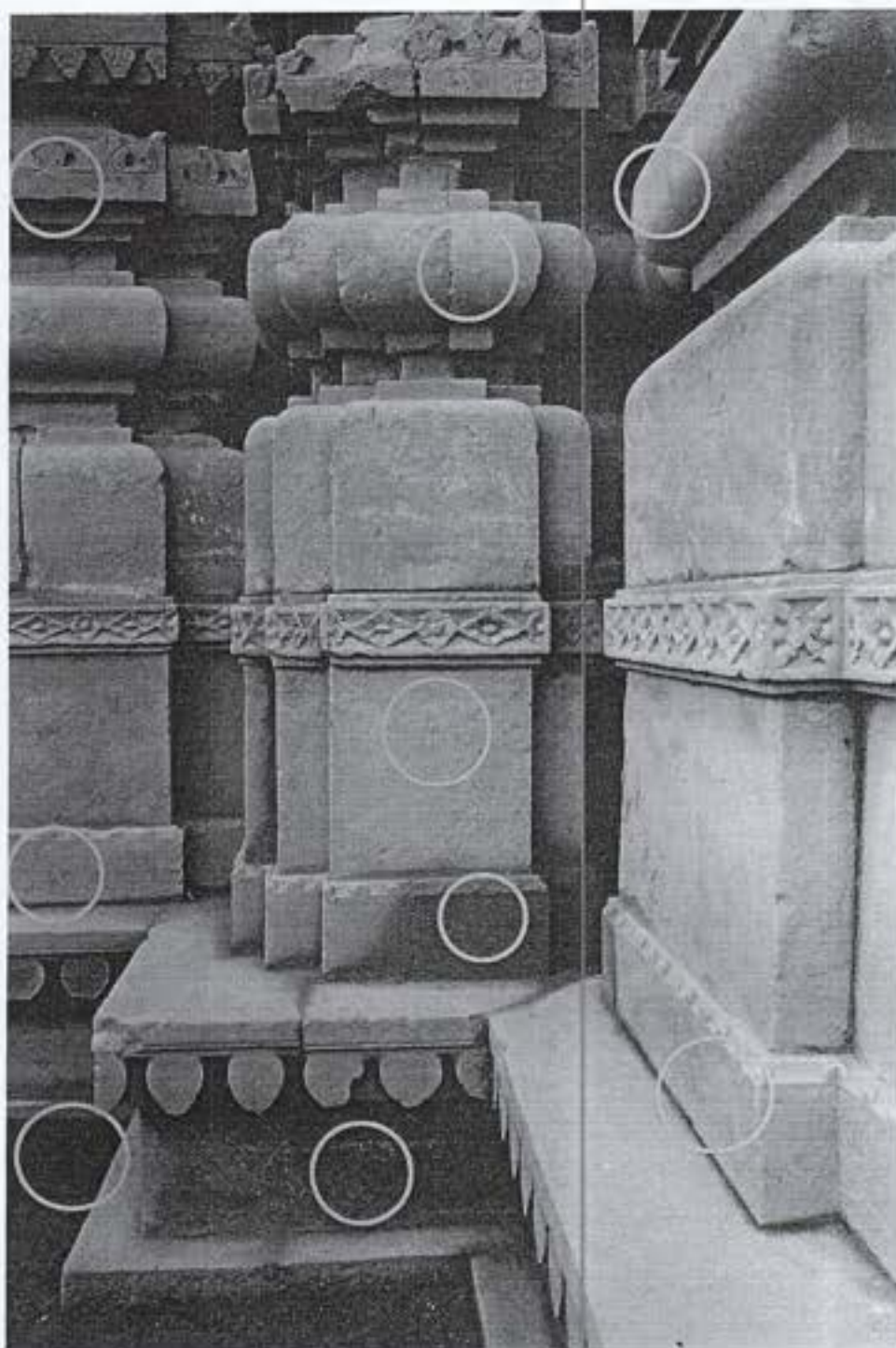


Western Wall: Trident marks



4045T
758

158

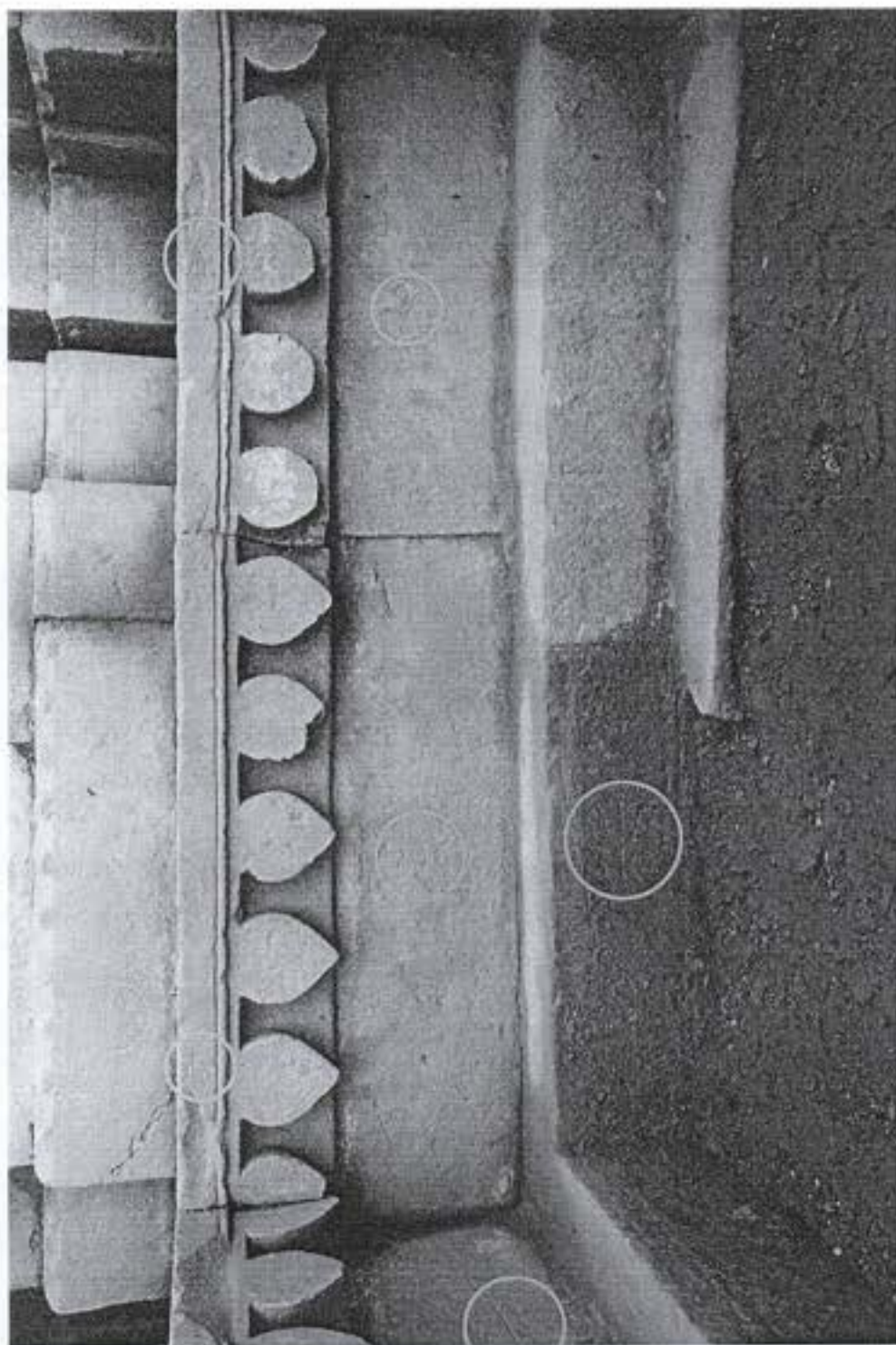


Western Wall: Trident marks



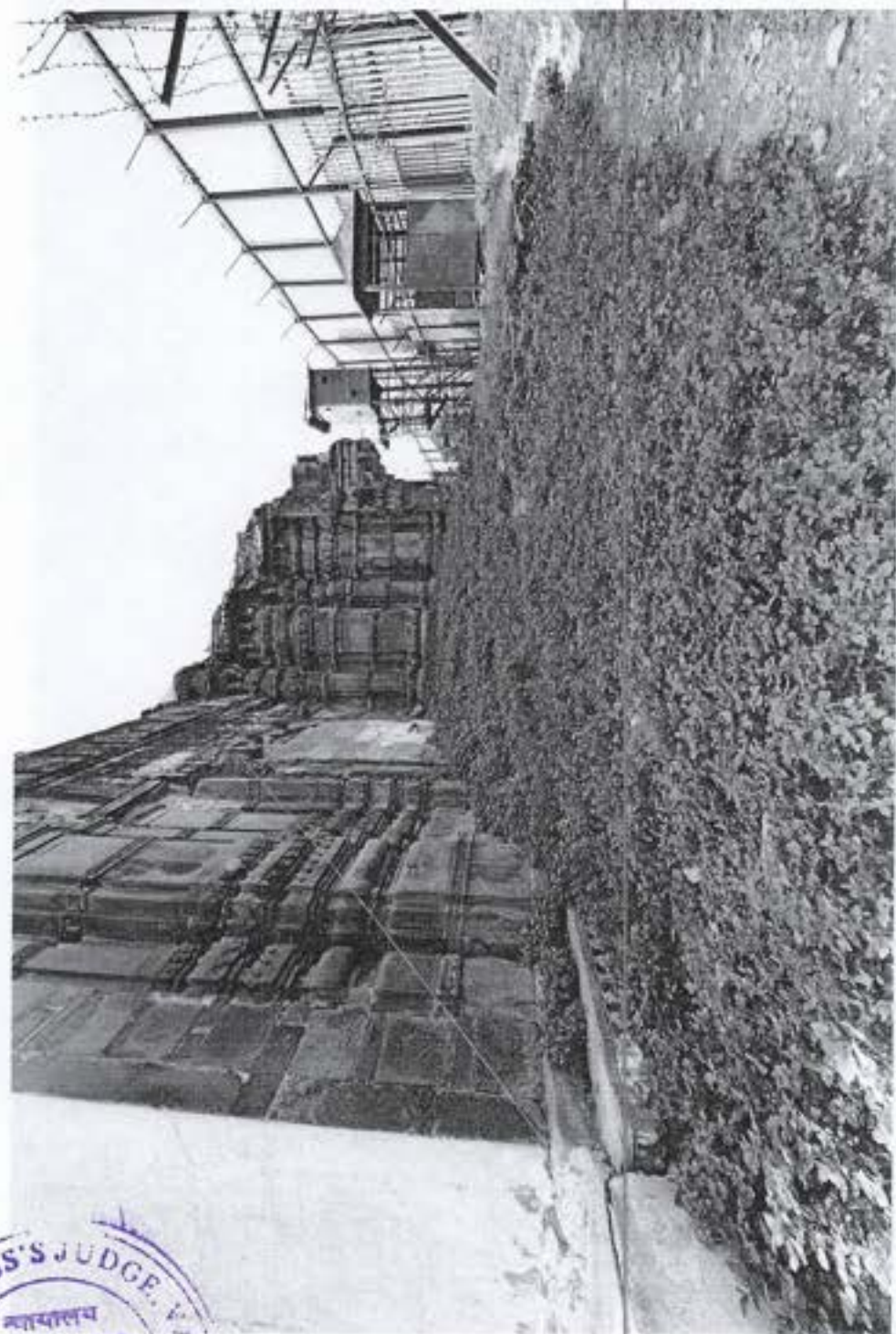
404-7
759

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Western Wall: Trident and single knot marks





404-5T
760

Northwest Side: Heap of debris dumped against the wall

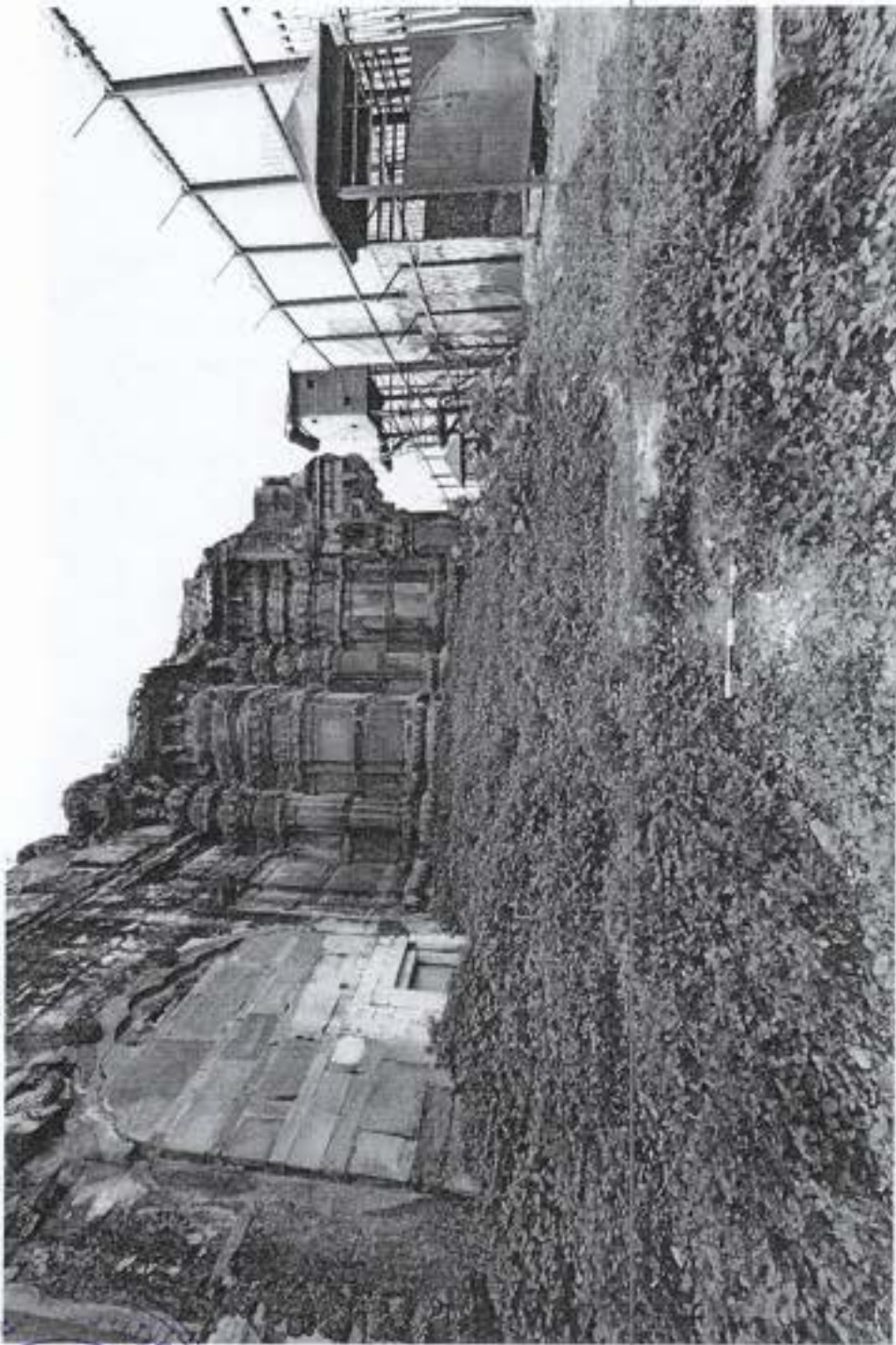


4043T
761



Northwest Side: After debris clearance



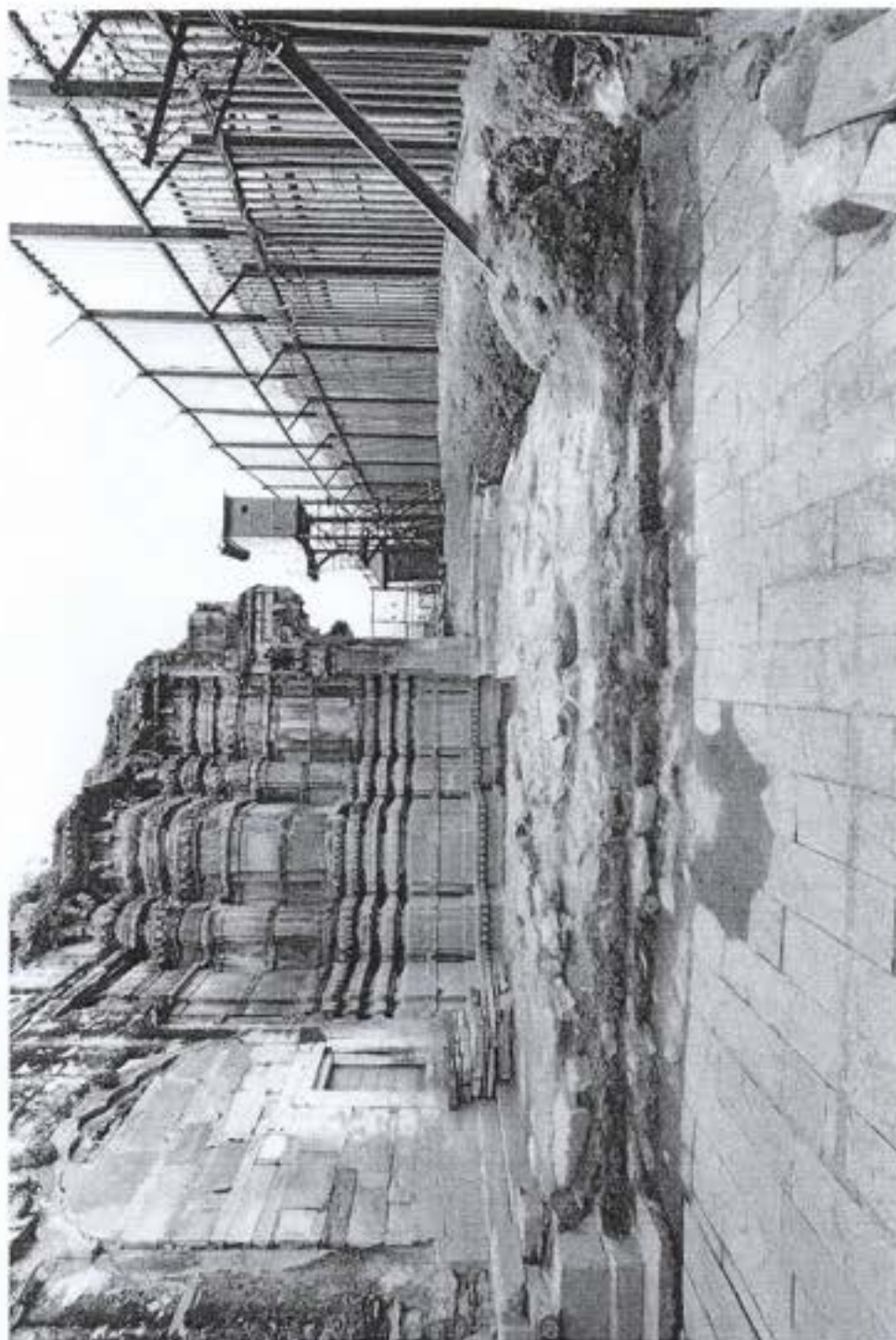


Northwest Corner: Buried under heap of debris

4045
762

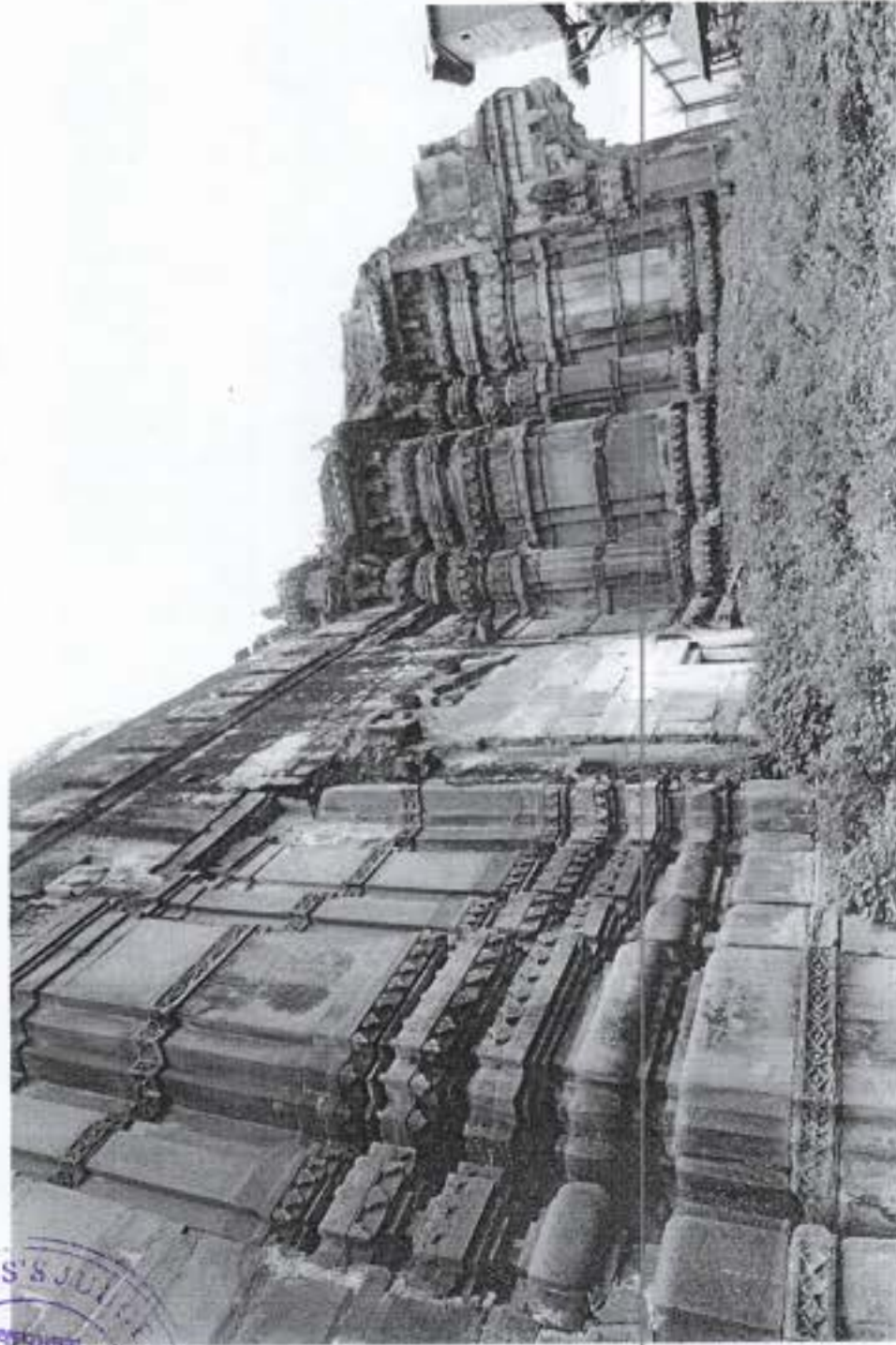
404T
763

163



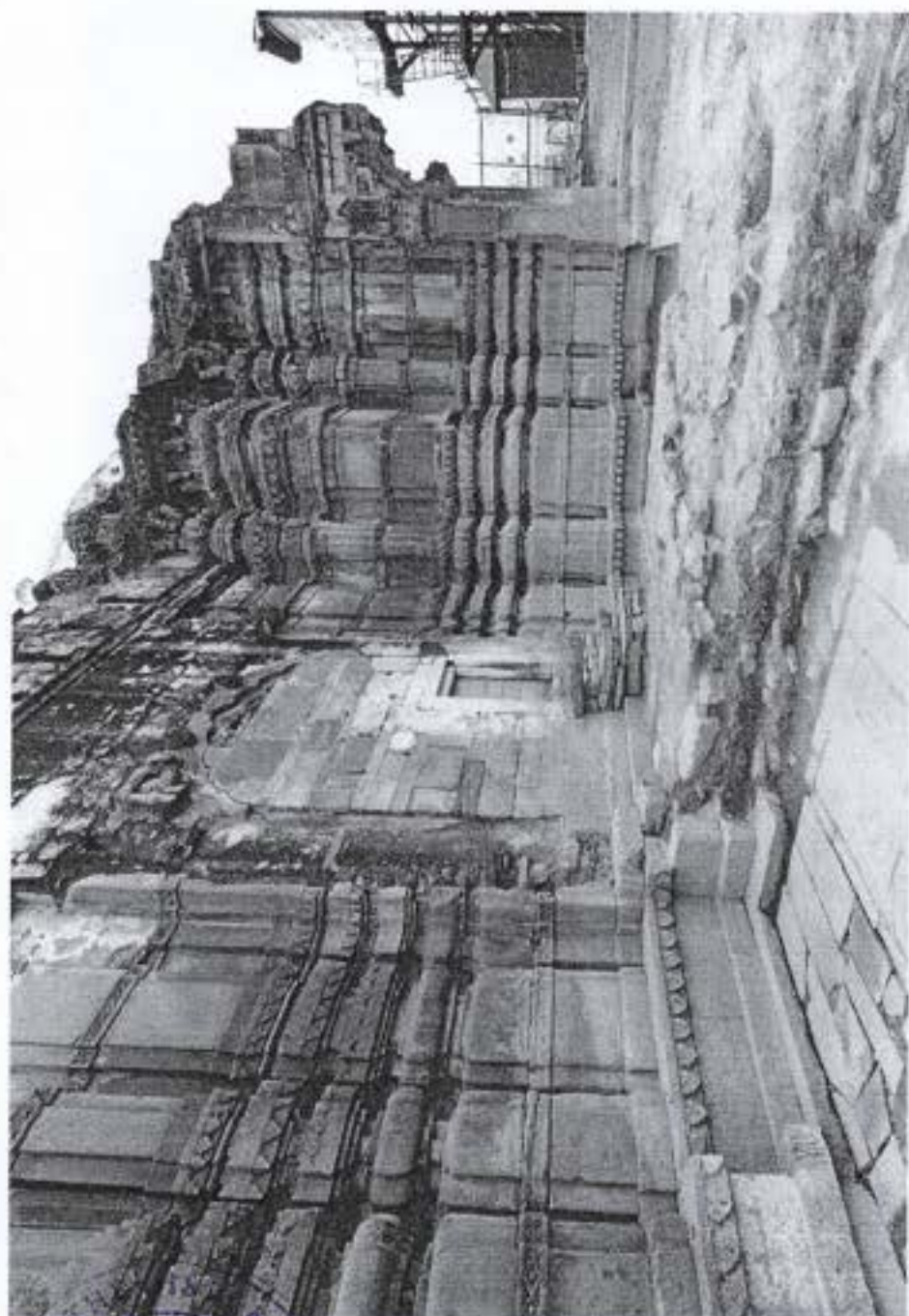
Northwest Corner: After debris clearance





Western Wall: Western entrance of north hall buried under heap of debris

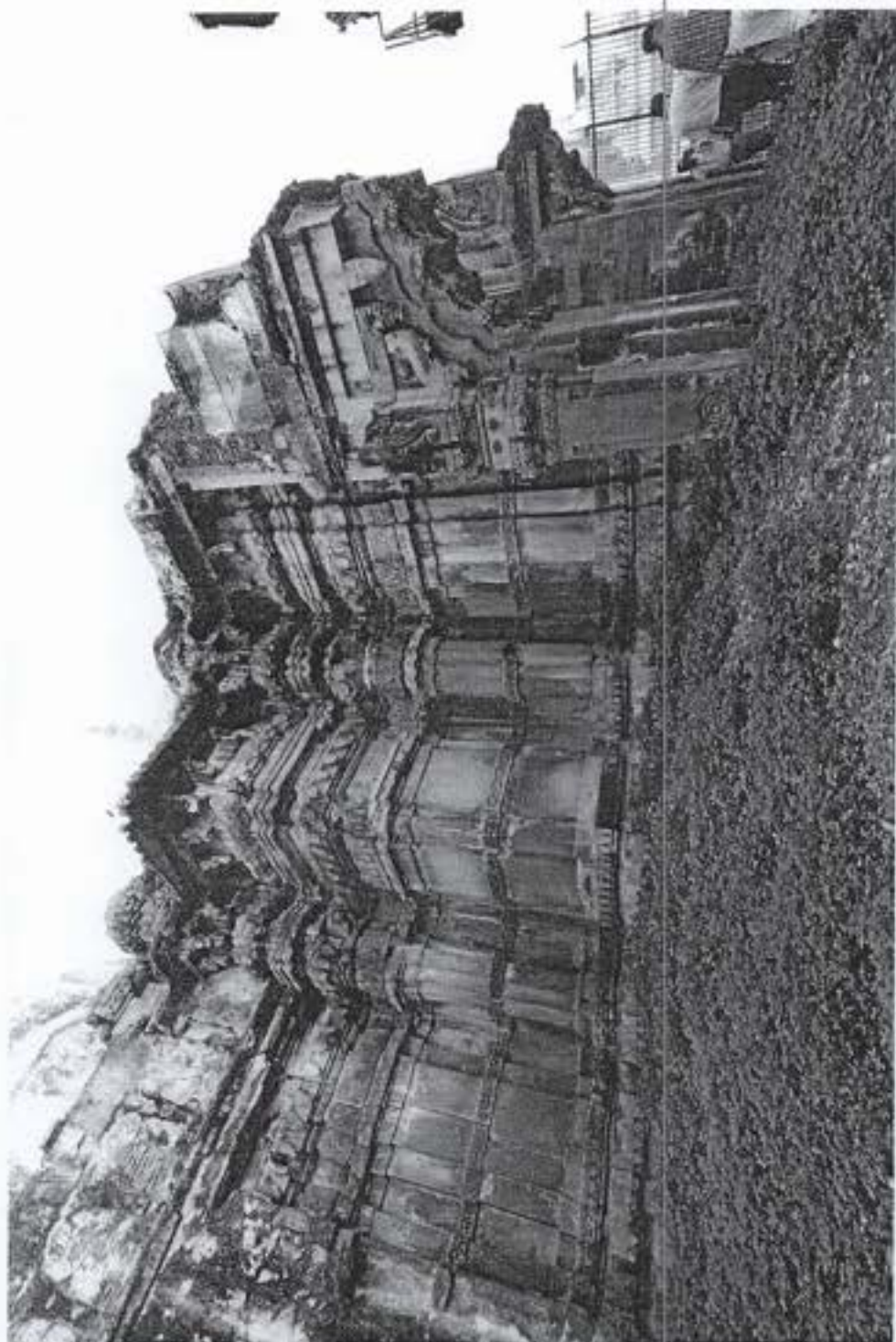
409-5T
764



Western Wall: Western entrance of north hall, after clearance

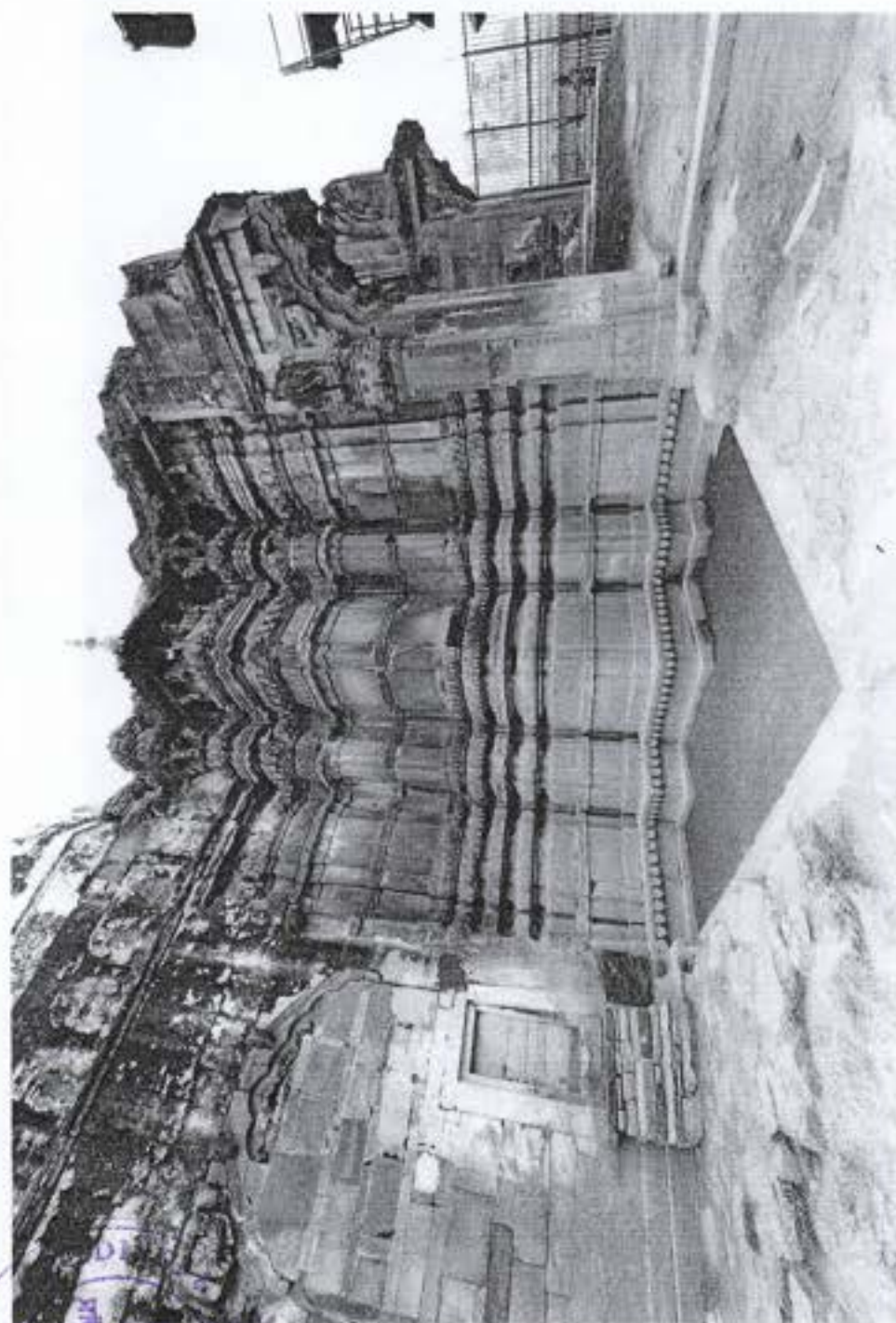


4045
765



Northwest Corner: Buried under heap of debris

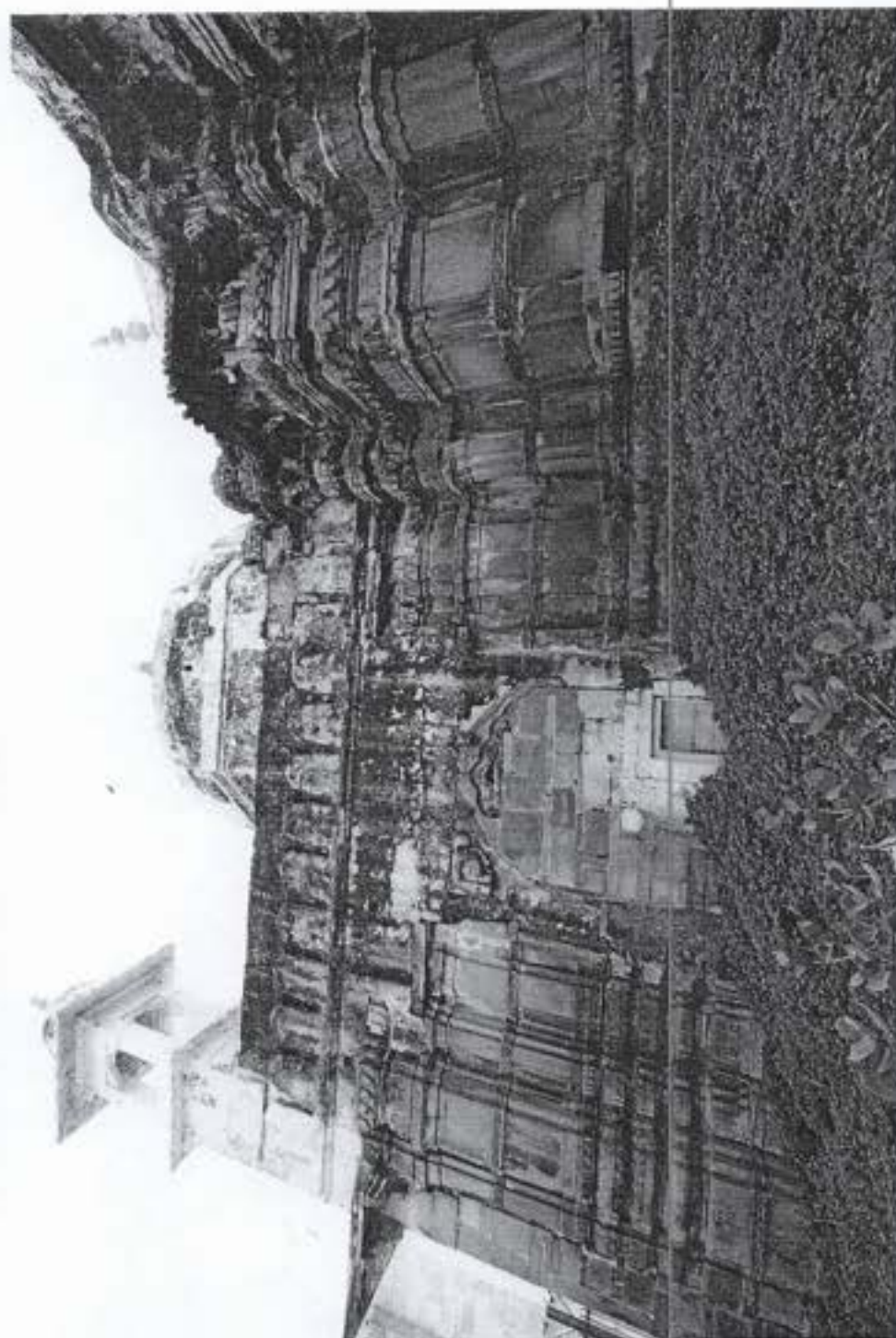
4045
766



Northwest Corner: After debris clearance

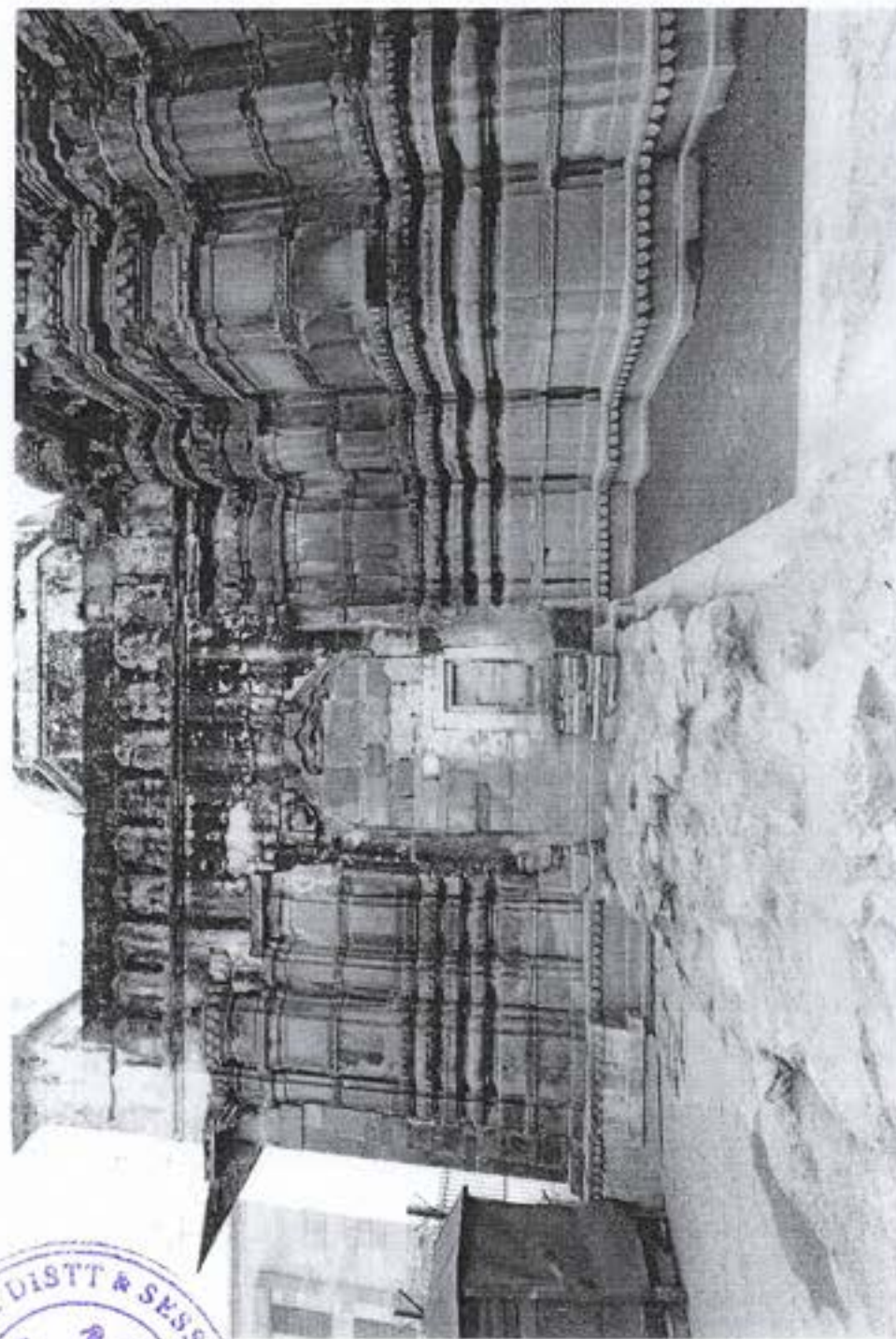
4045T
767





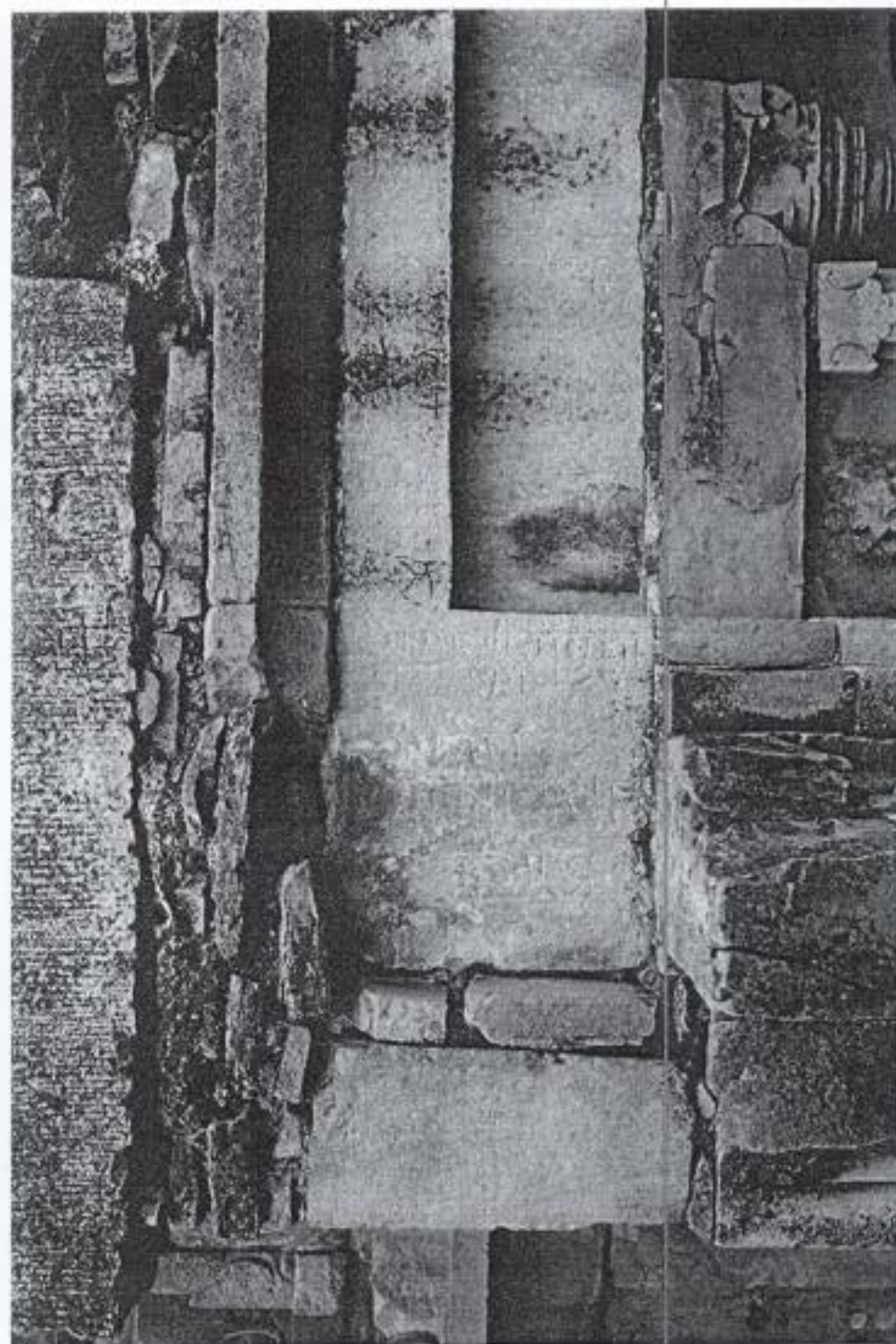
Western Wall: Debris dumped against the wall

404
768



Wesant Wall: After clearance

404T
769

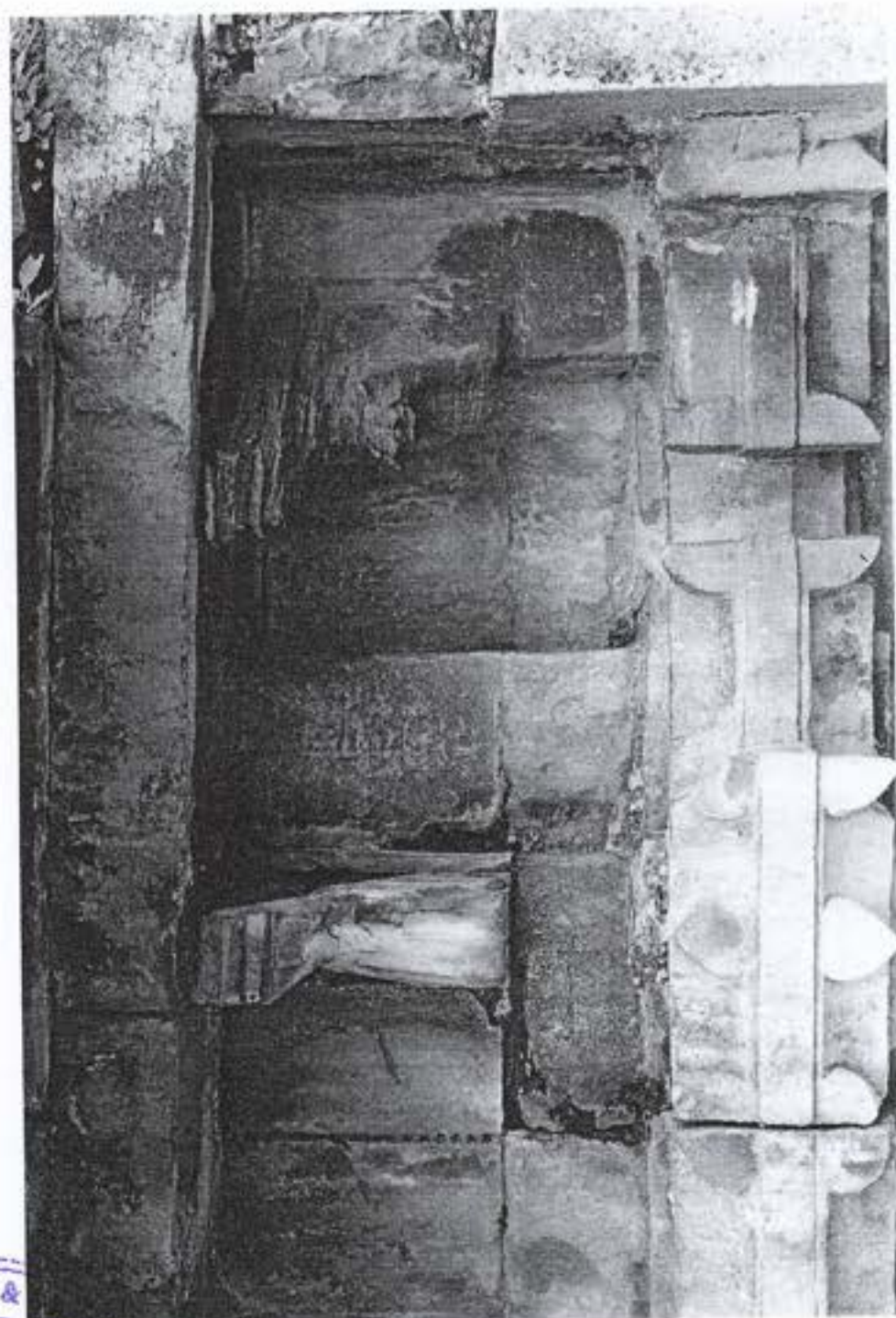


Western chamber: Inscription on northern wall

4045
770

4e45
771

171

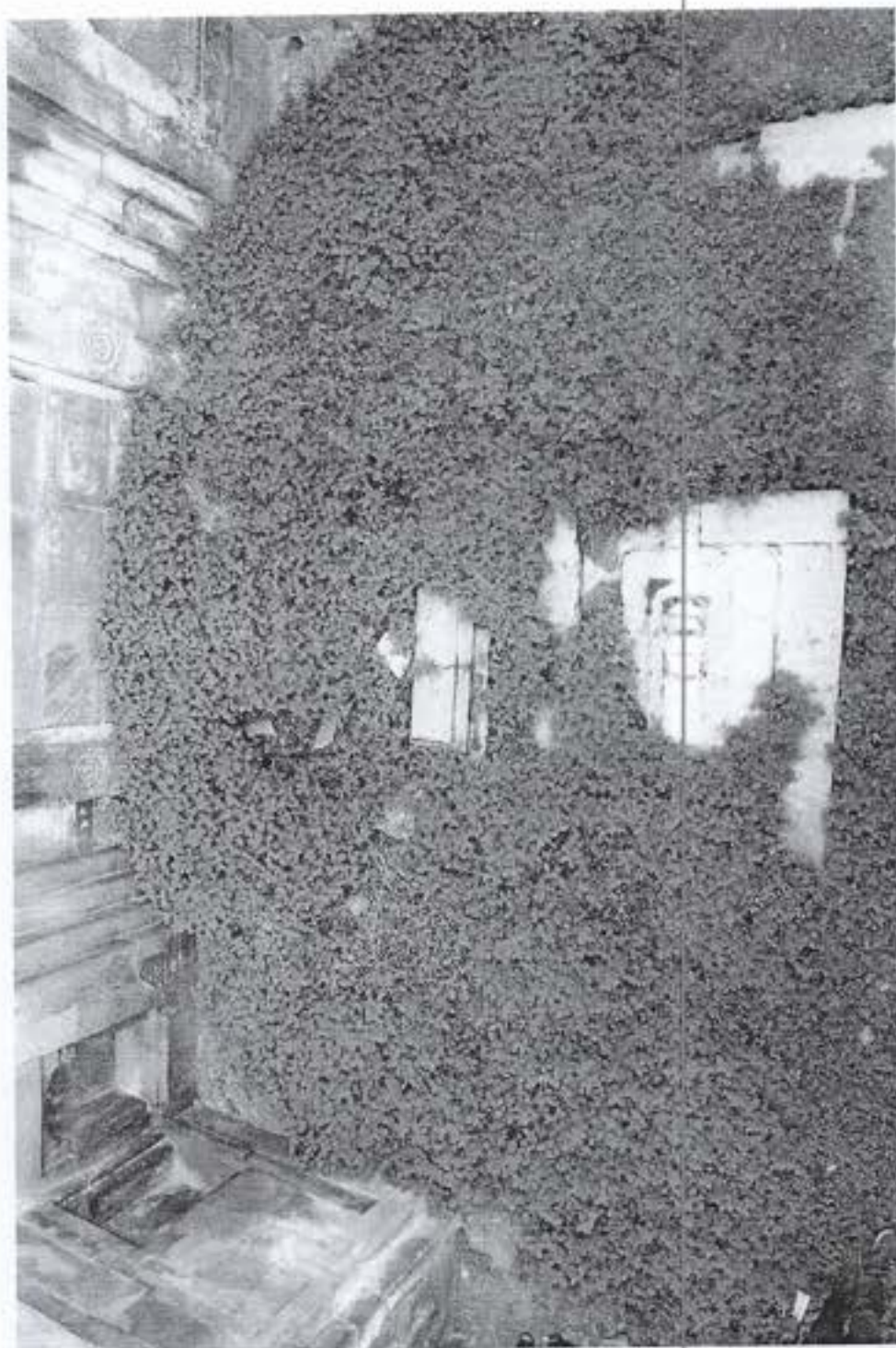


Northwest Side: Inscription



4045
772

172

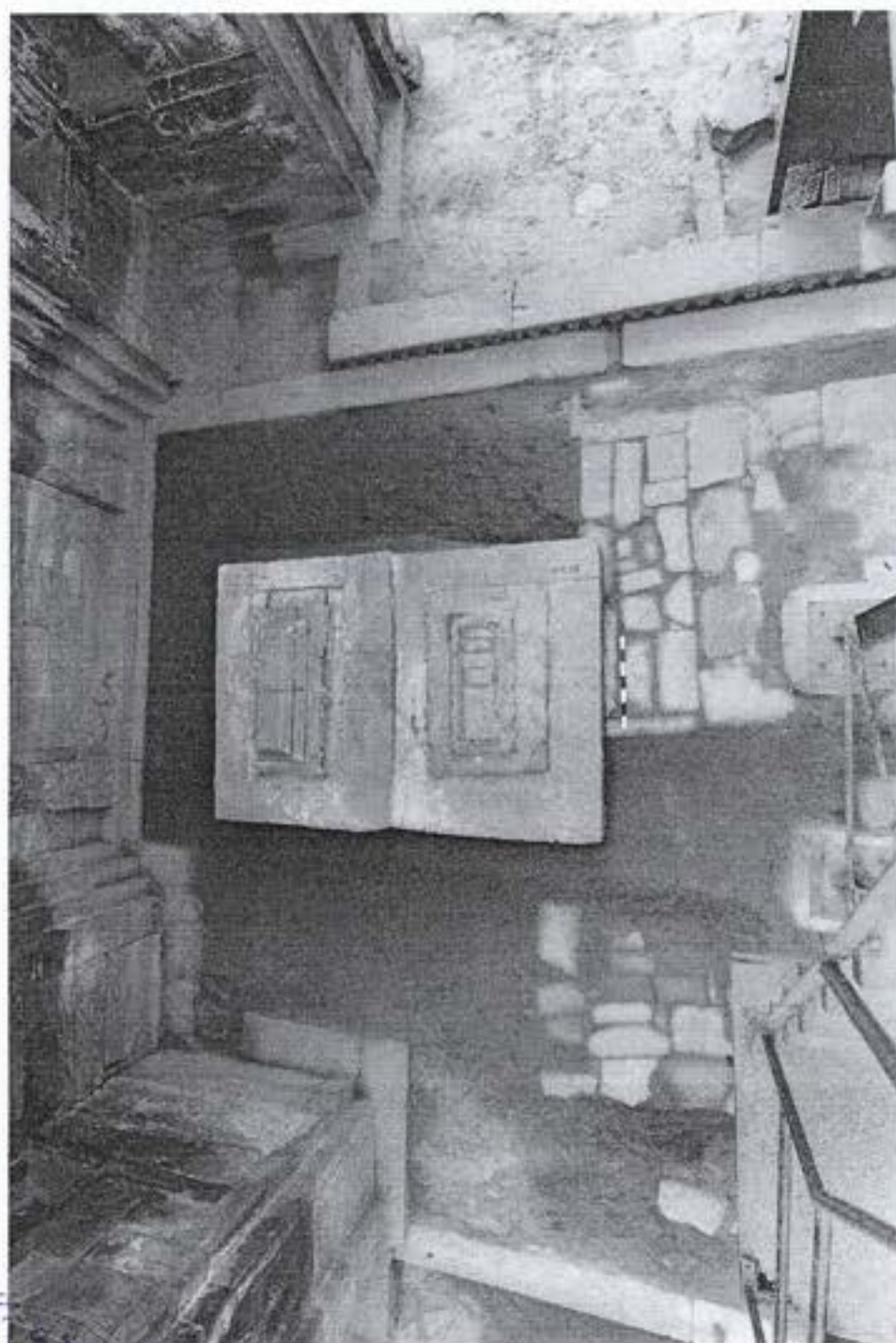


Western Chamber: Dump of debris



404^{5T}
773

173



Western Chamber: After clearance



4042
774

174

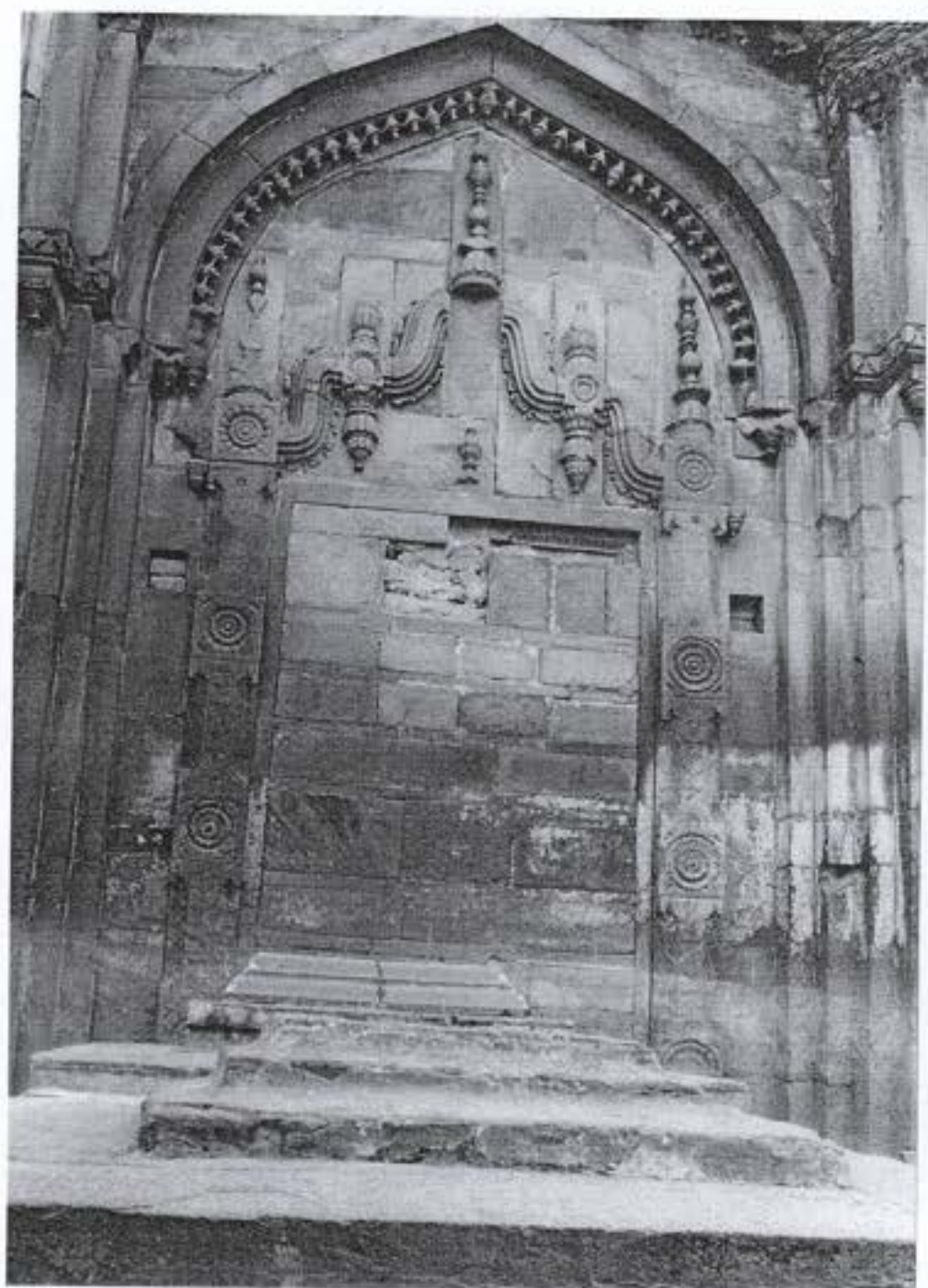


Western Chamber: Entrance in eastern wall, before clearance



4045
775

175



Western Chamber: Entrance in eastern wall, after clearance



4045
776

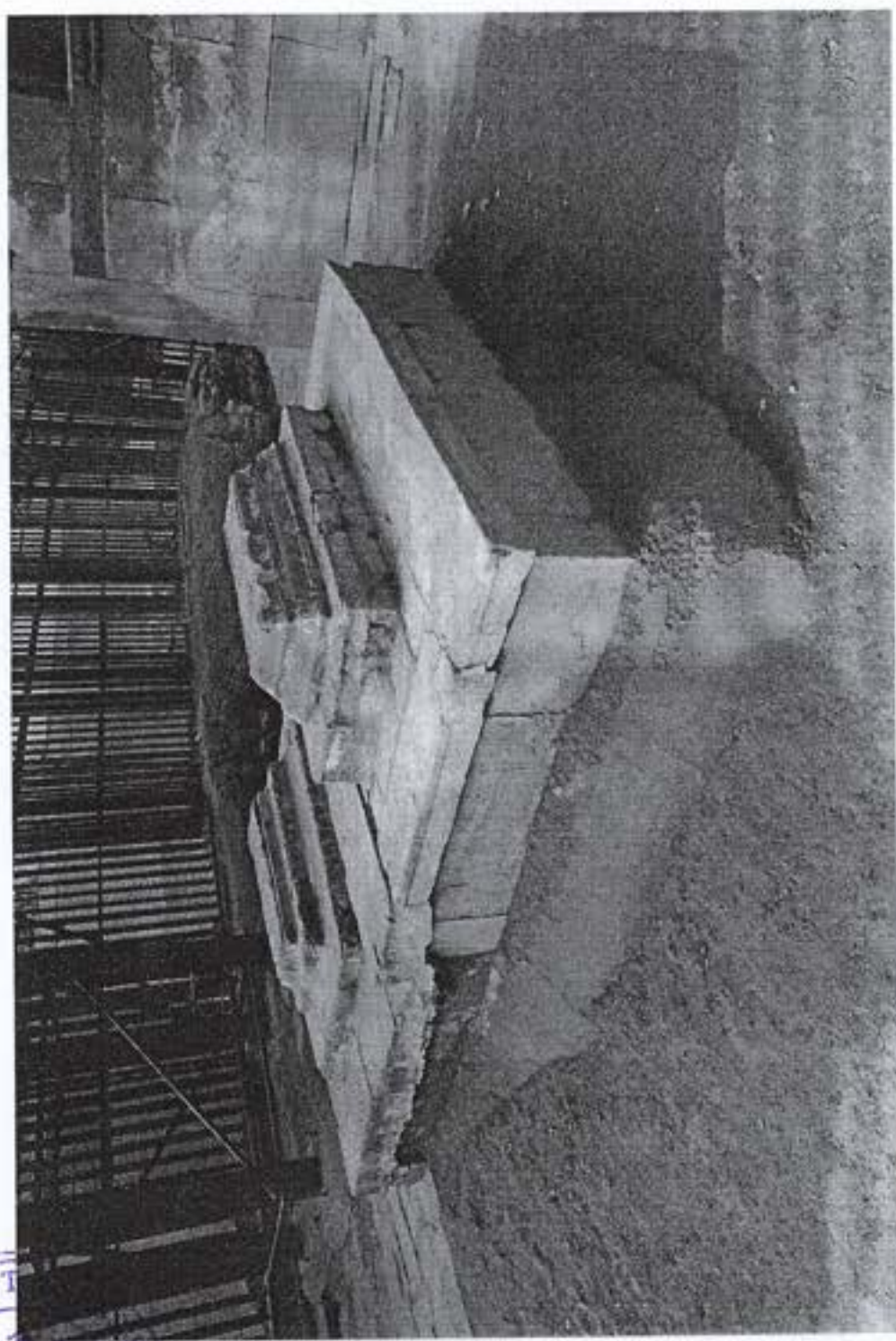
176



Western Chamber: Graves covered under debris



4045
777

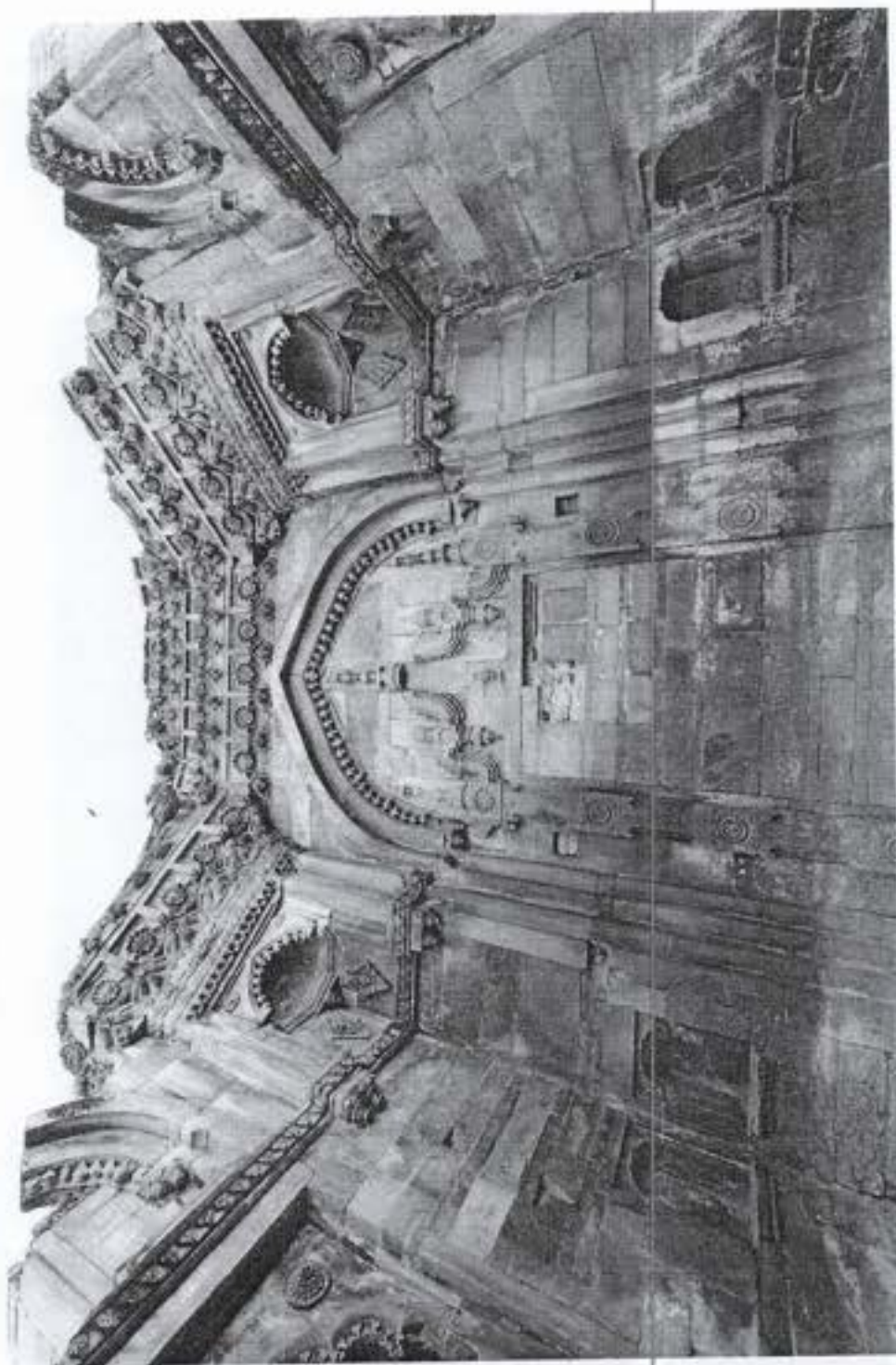


Western Chamber: Graves after clearance



4045
778

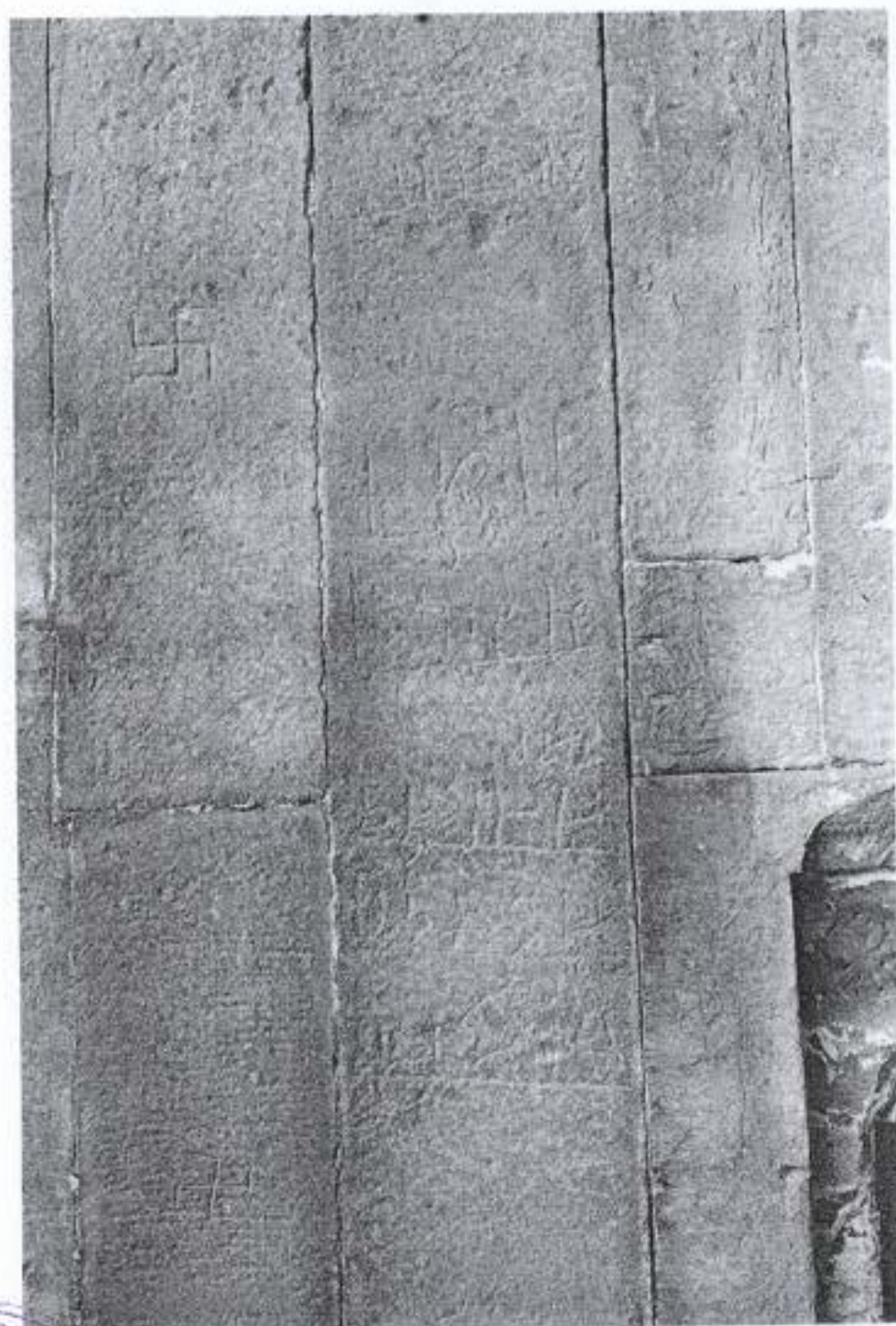
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Western Chamber: Decorated entrance in eastern wall



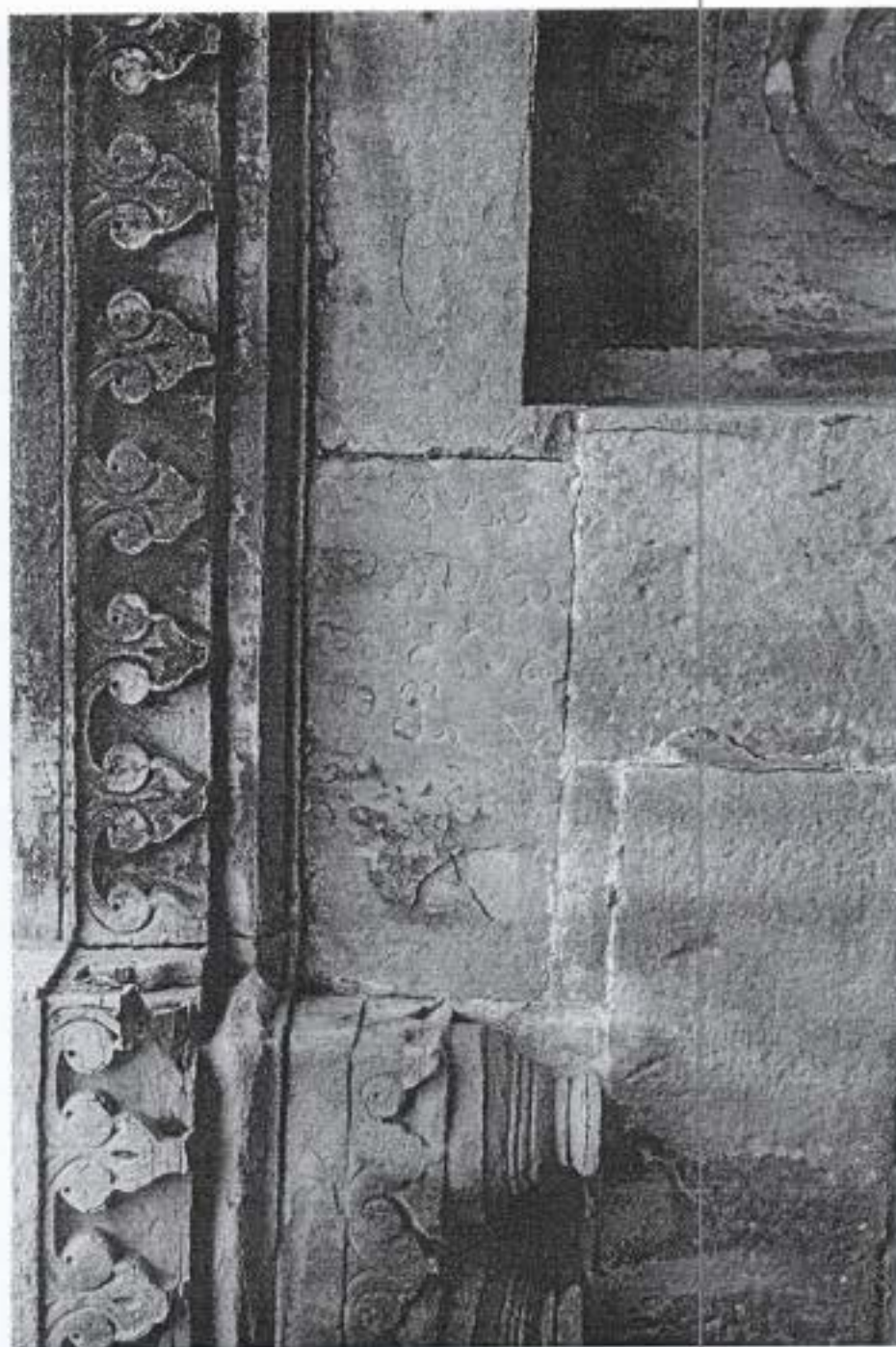
404T
779



Western Chamber: Inscription on southern wall



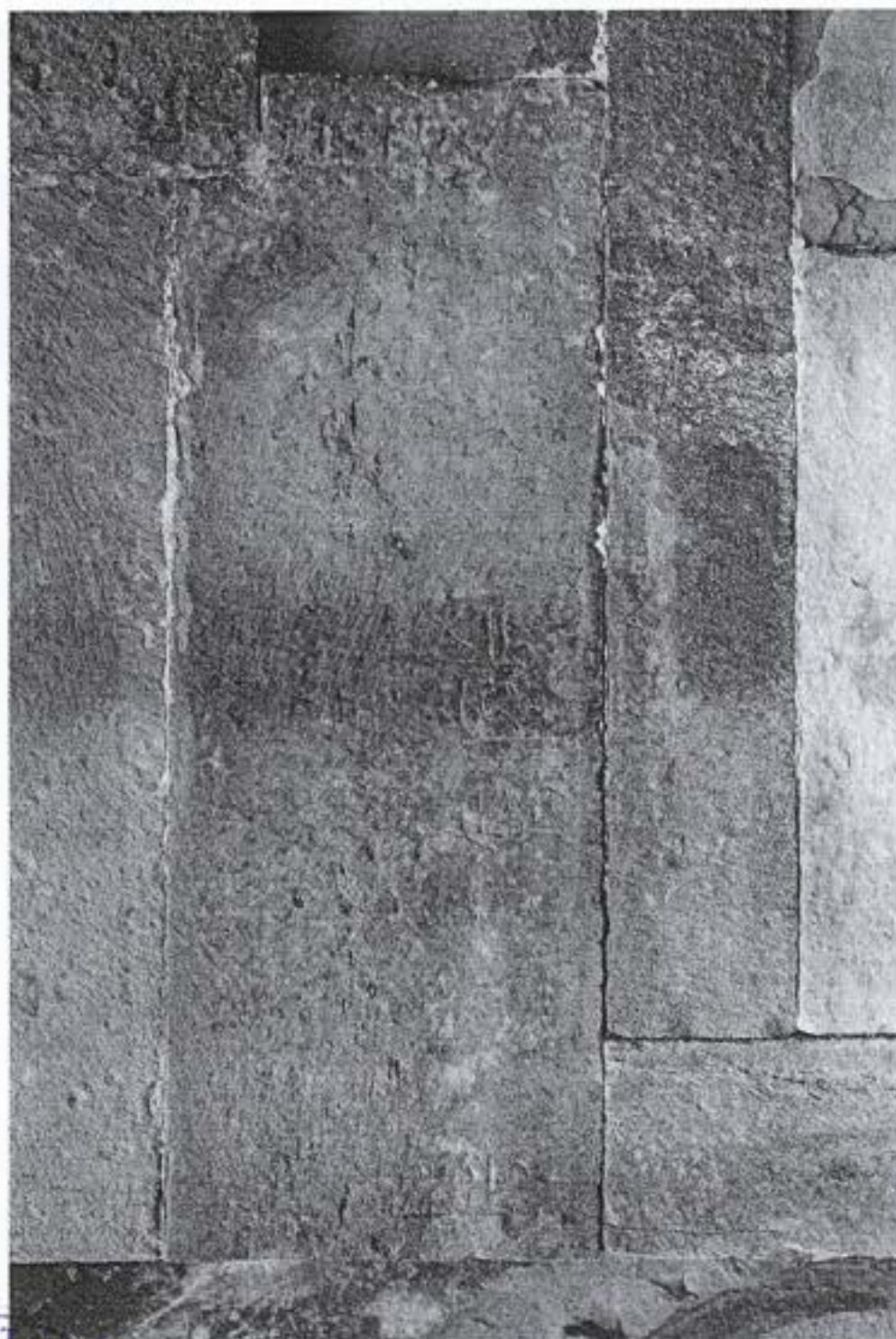
404²⁴
780



Western Chamber: Inscription on southern wall



404-51
781

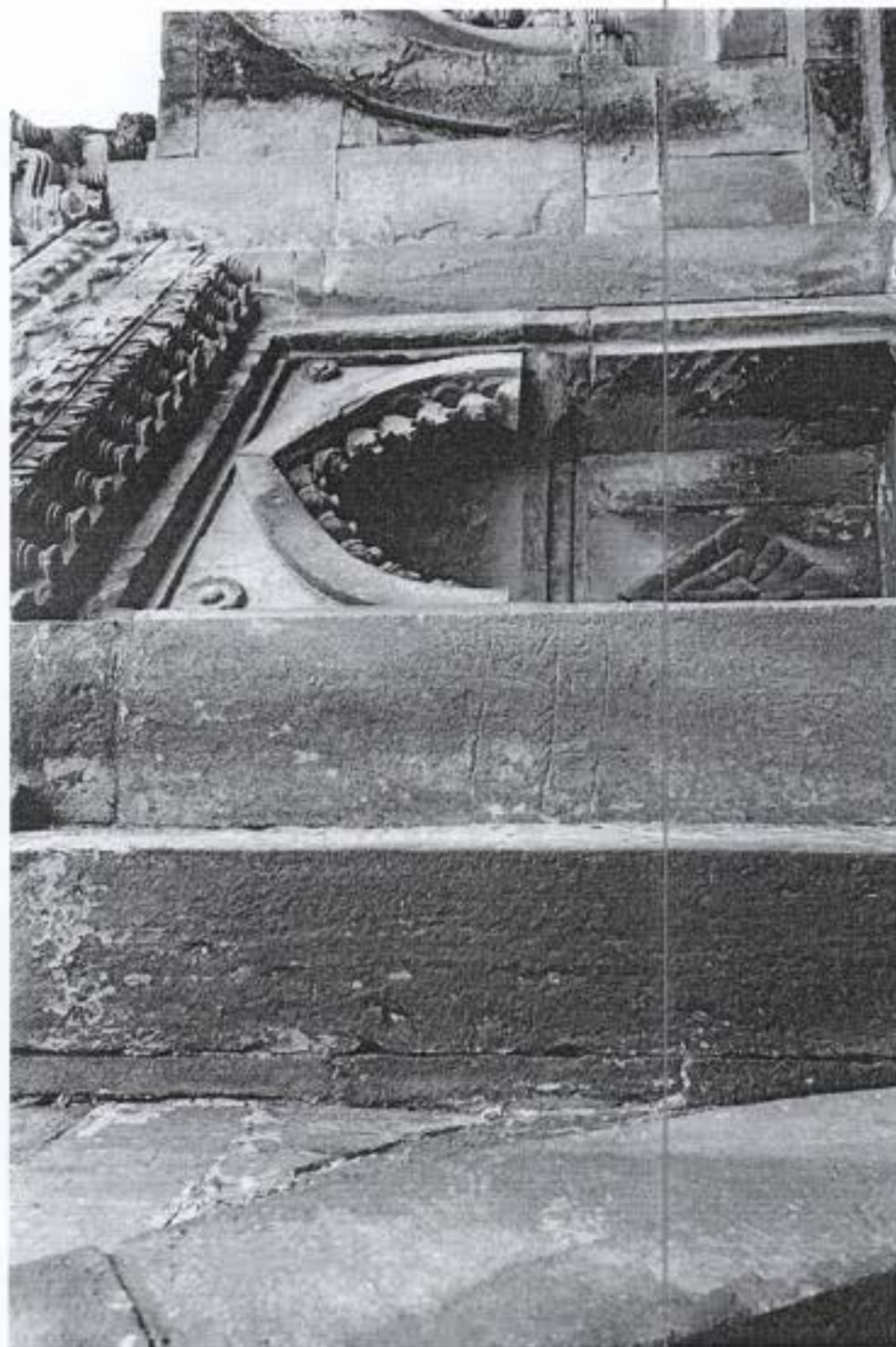


Western Chamber: Inscription on wall



4045T
782

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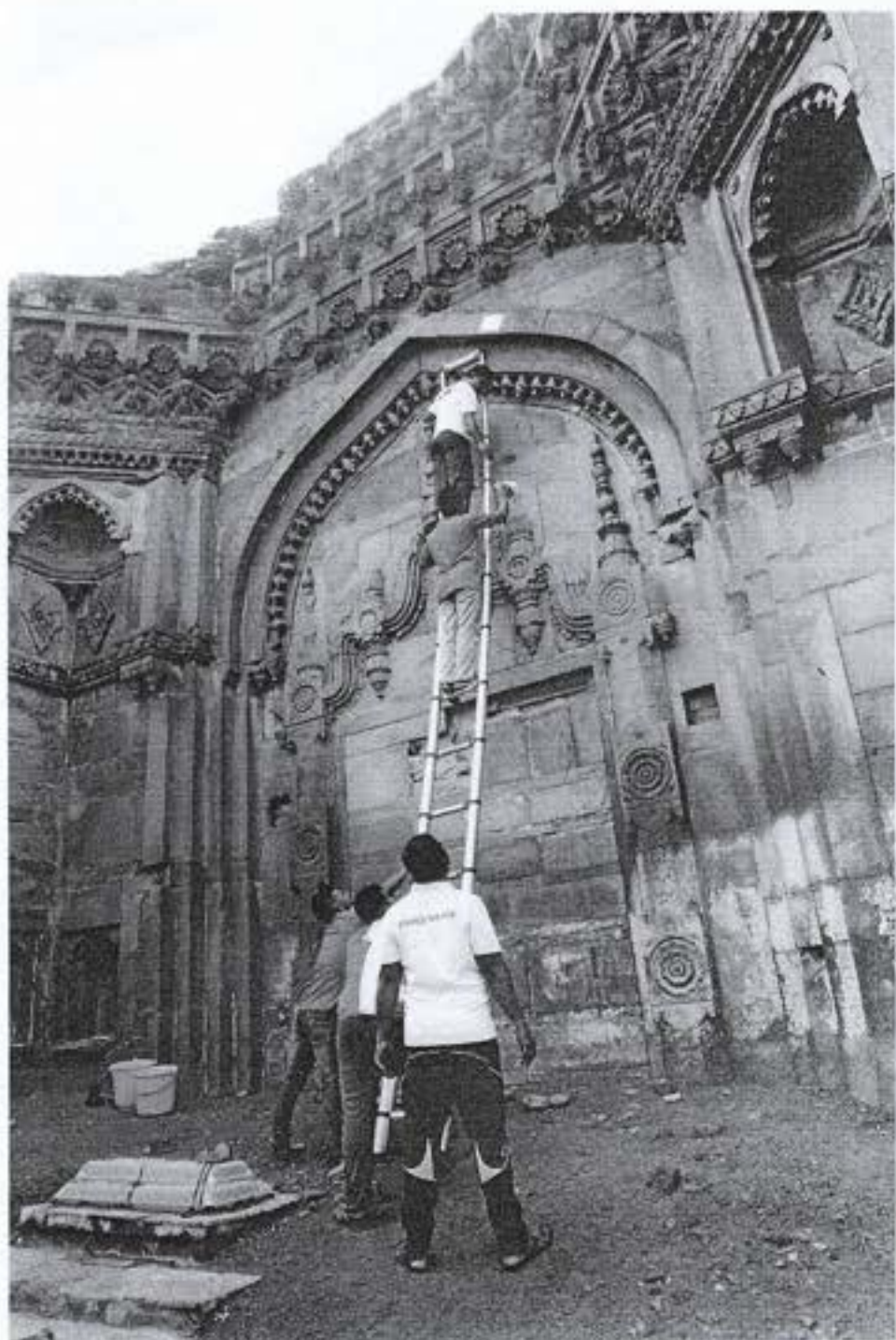


Western Chamber: Inscription on wall



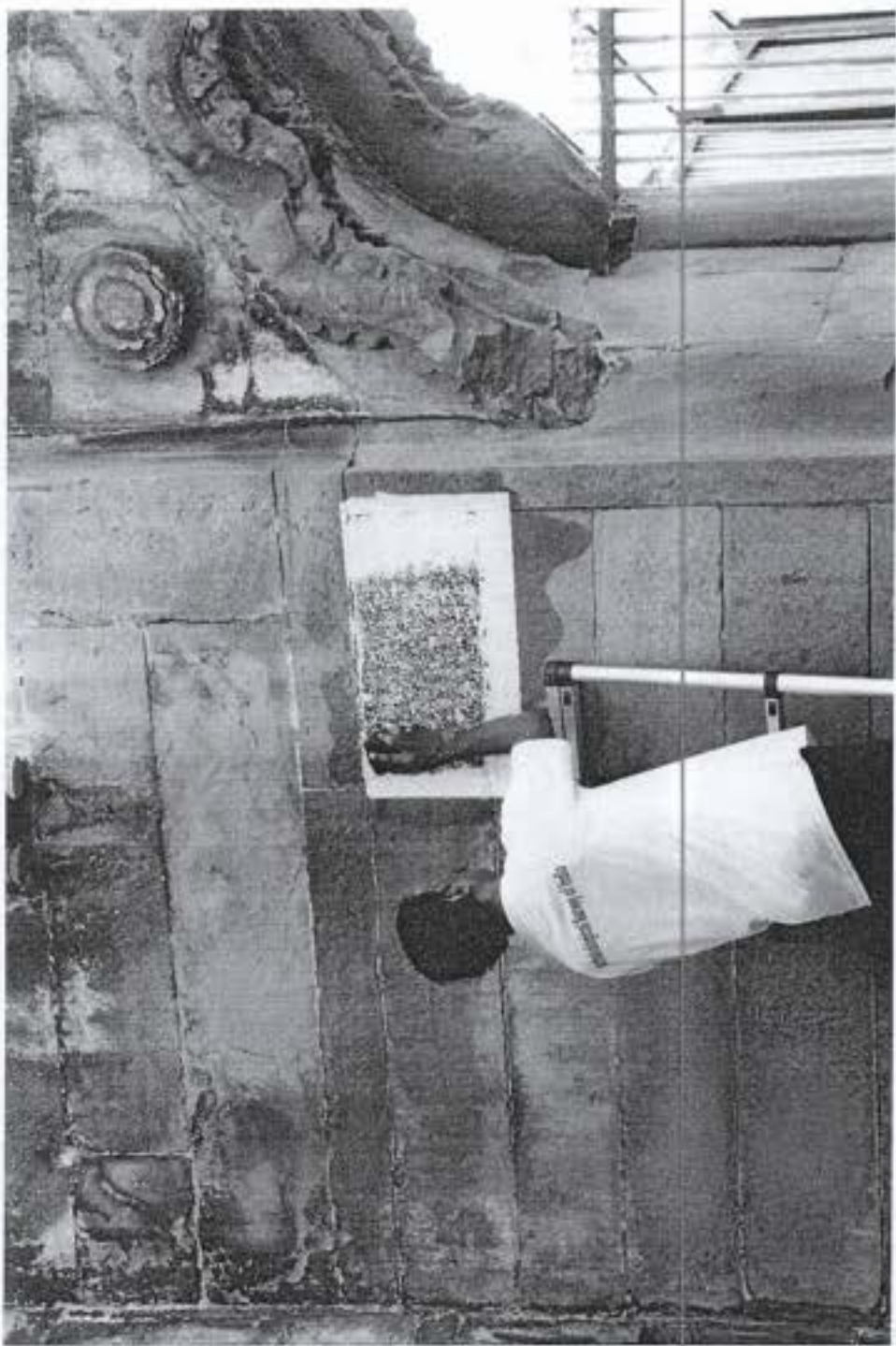
$$\frac{404\pi}{783}$$

183



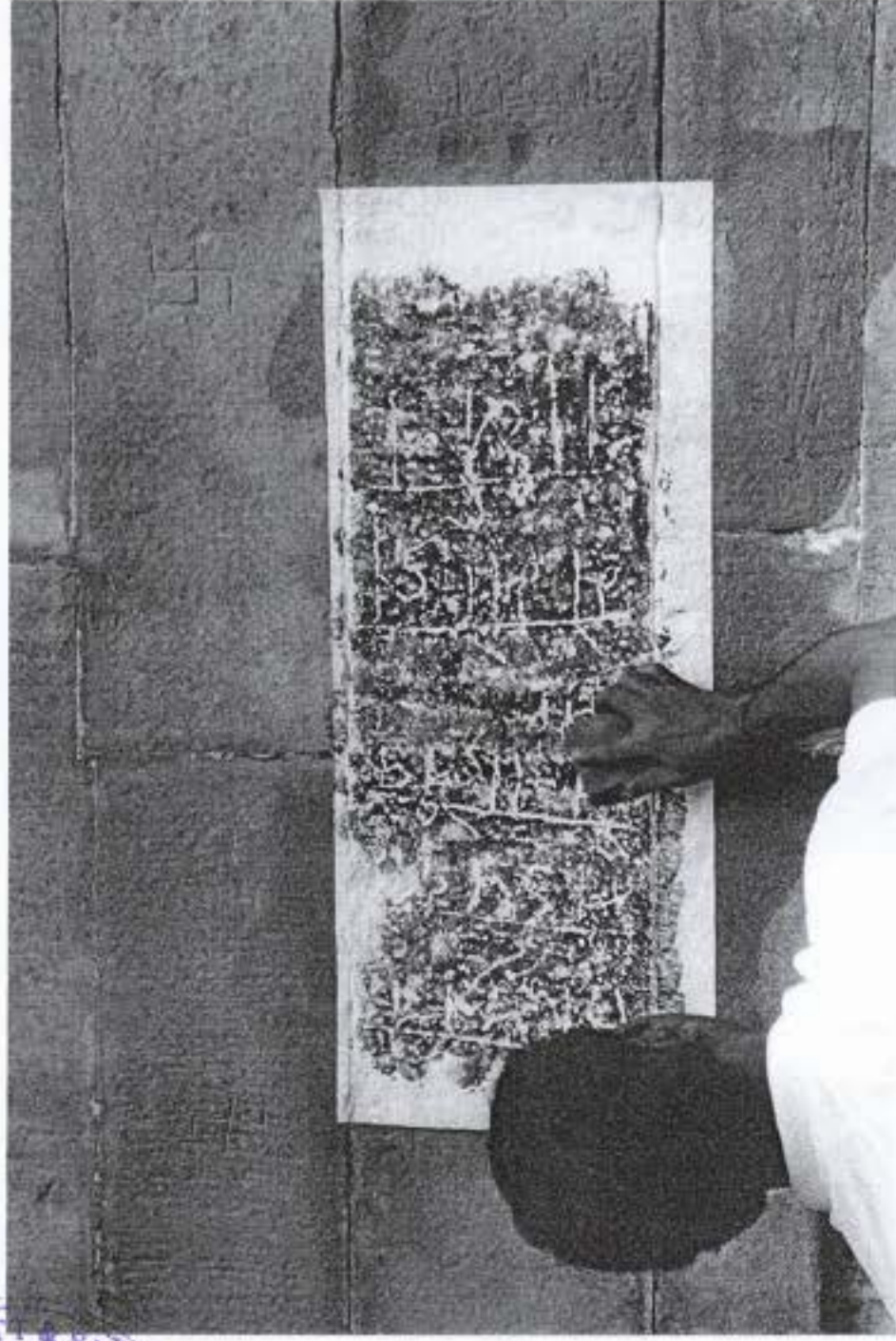
Western Chamber: Inscription on wall





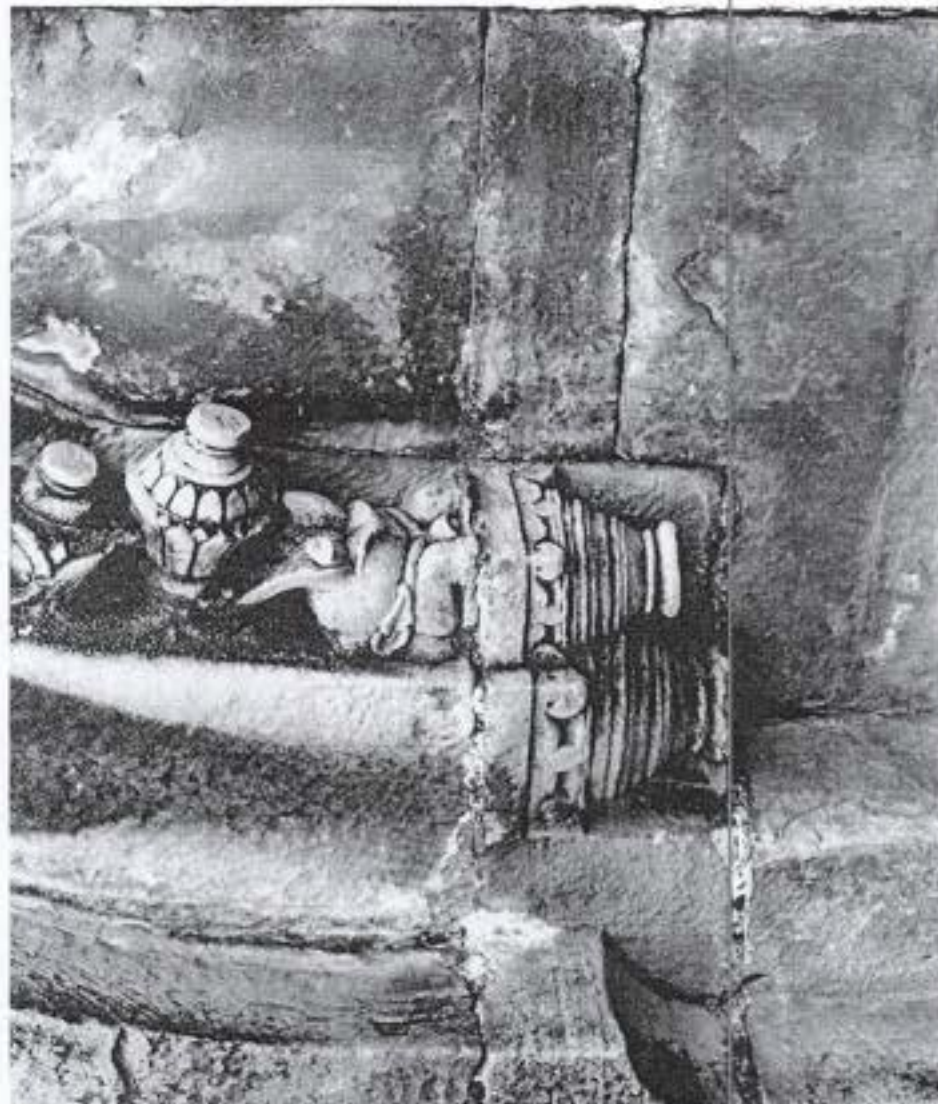
Western Chamber: Copying inscription

4045
784



Western Chamber: Copying inscription

4047
785



Western Chamber: Elephant on upper arch of southern entrance

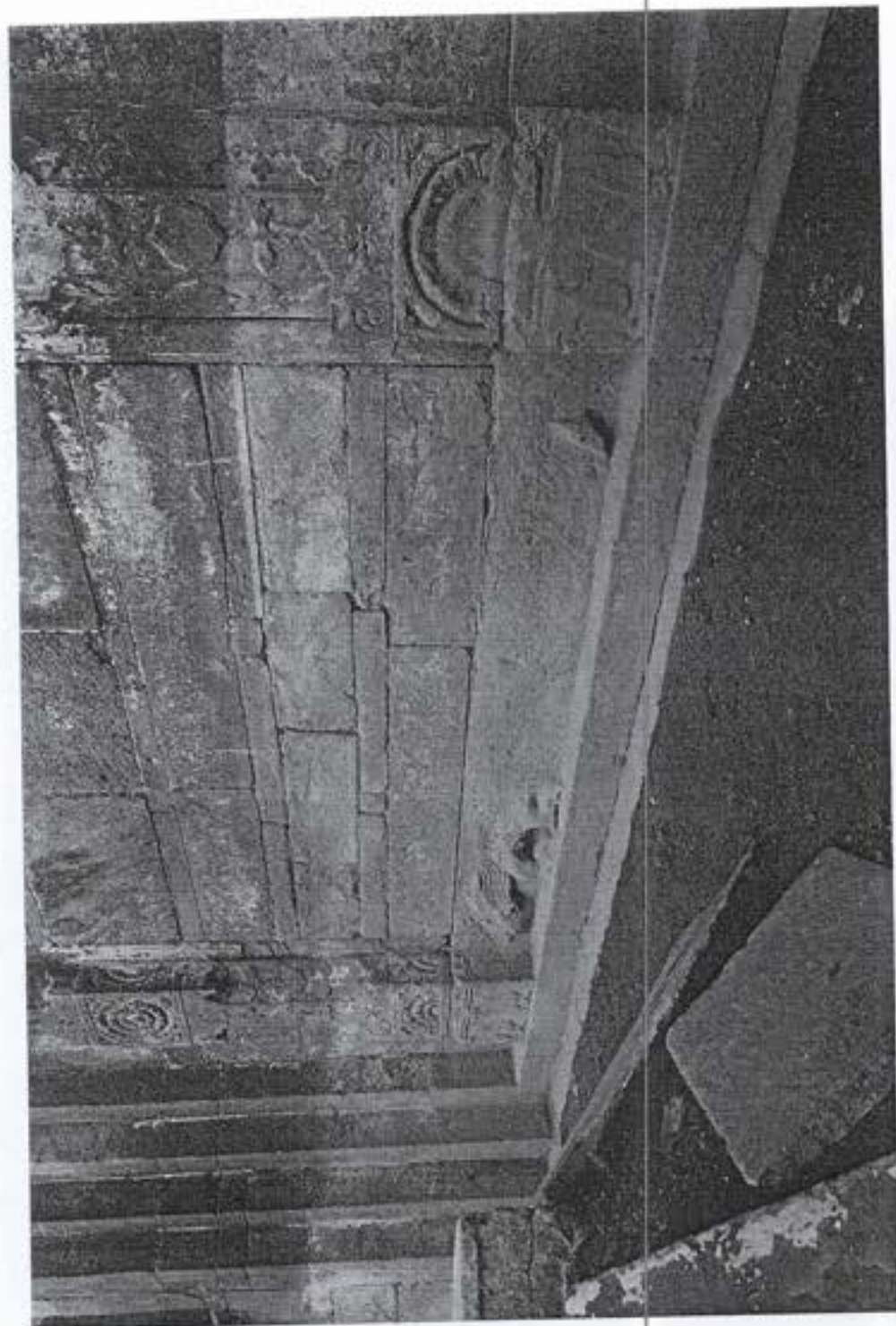
404-7
786

4045T
787



Western Chamber: Chopped off elephant figure on entrance in eastern wall





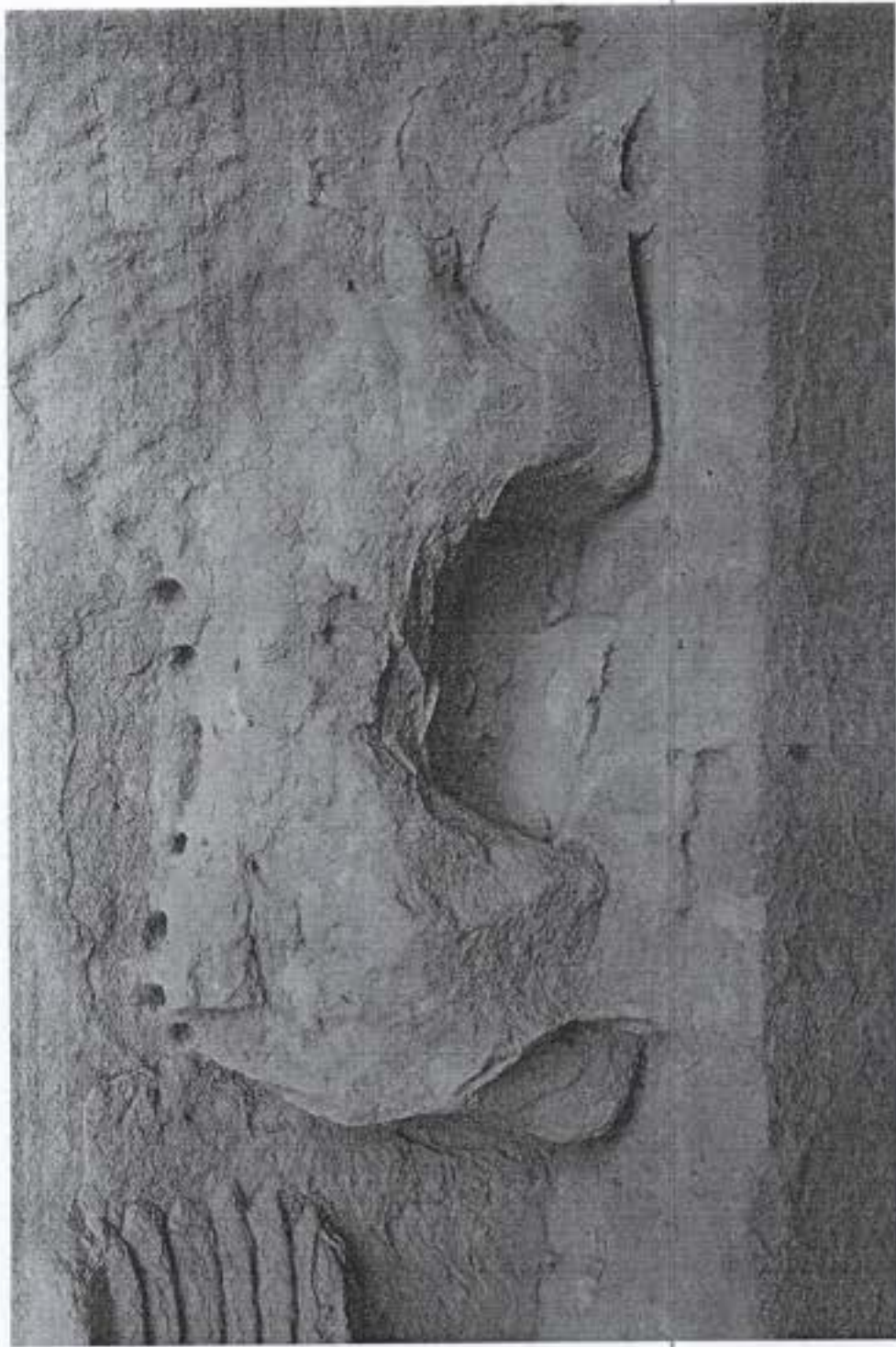
Western Chamber: Animal depiction on doorsill of main entrance

4045T
788



Western Chamber: Animal depiction on doorsill, close up

4e4π
789



Western Chamber: Damaged animal figure on doorsill

4043T
790

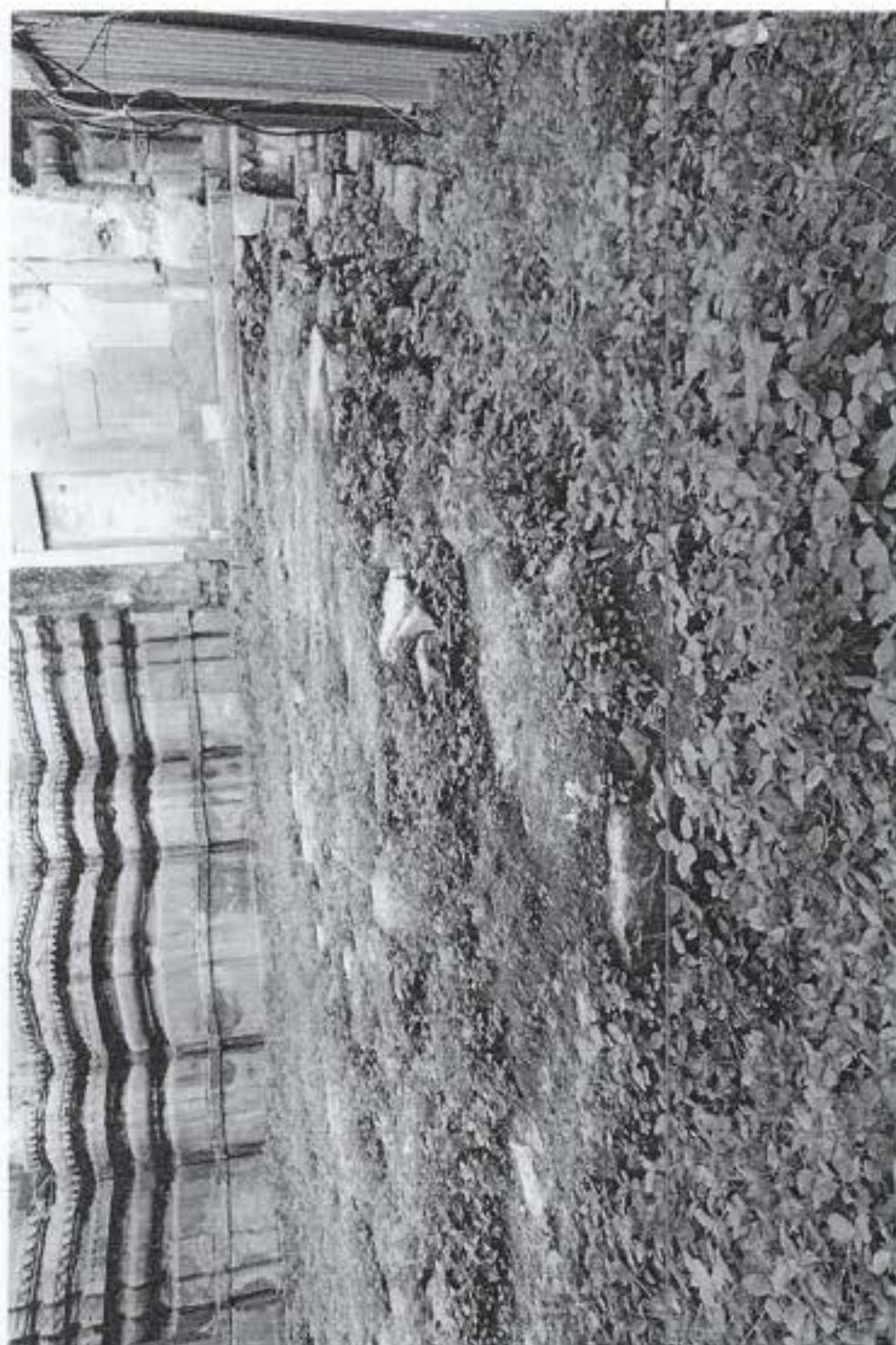
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Western Chamber: Damaged bird (kukkut) figure on doorsill



404ST
792

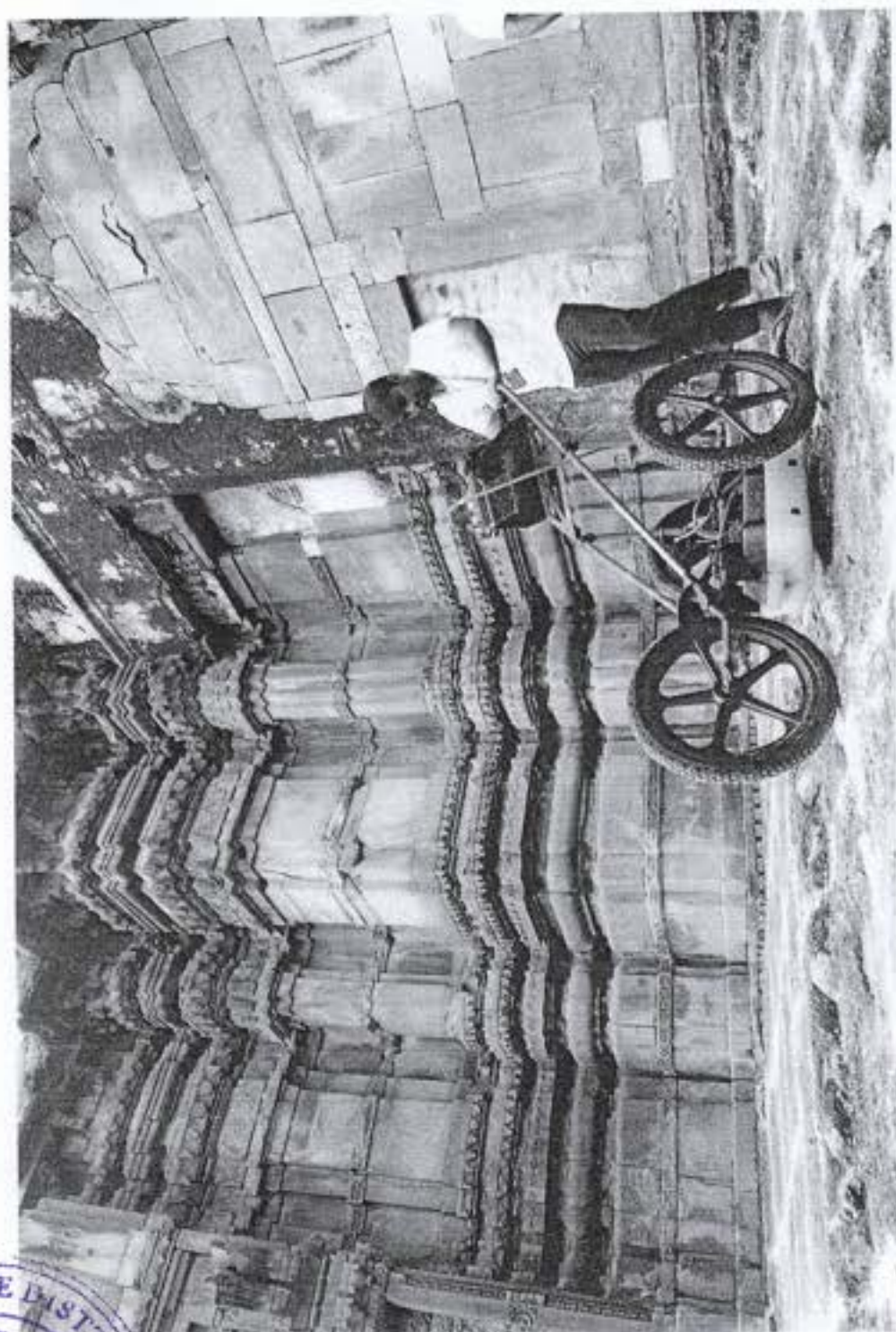


Southwest Side: Before cleaning



40451
793

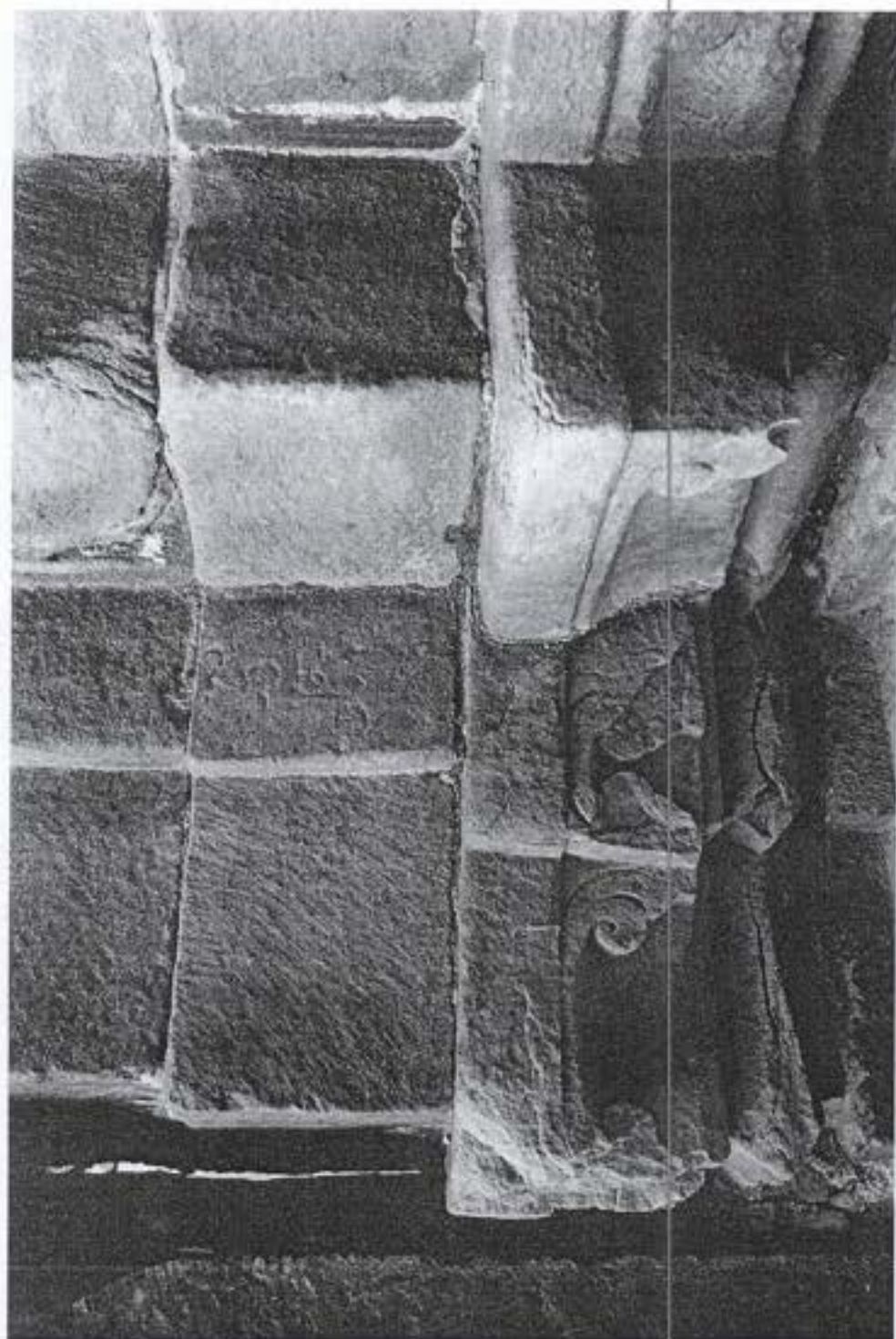
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Southwest Side: GPR Survey



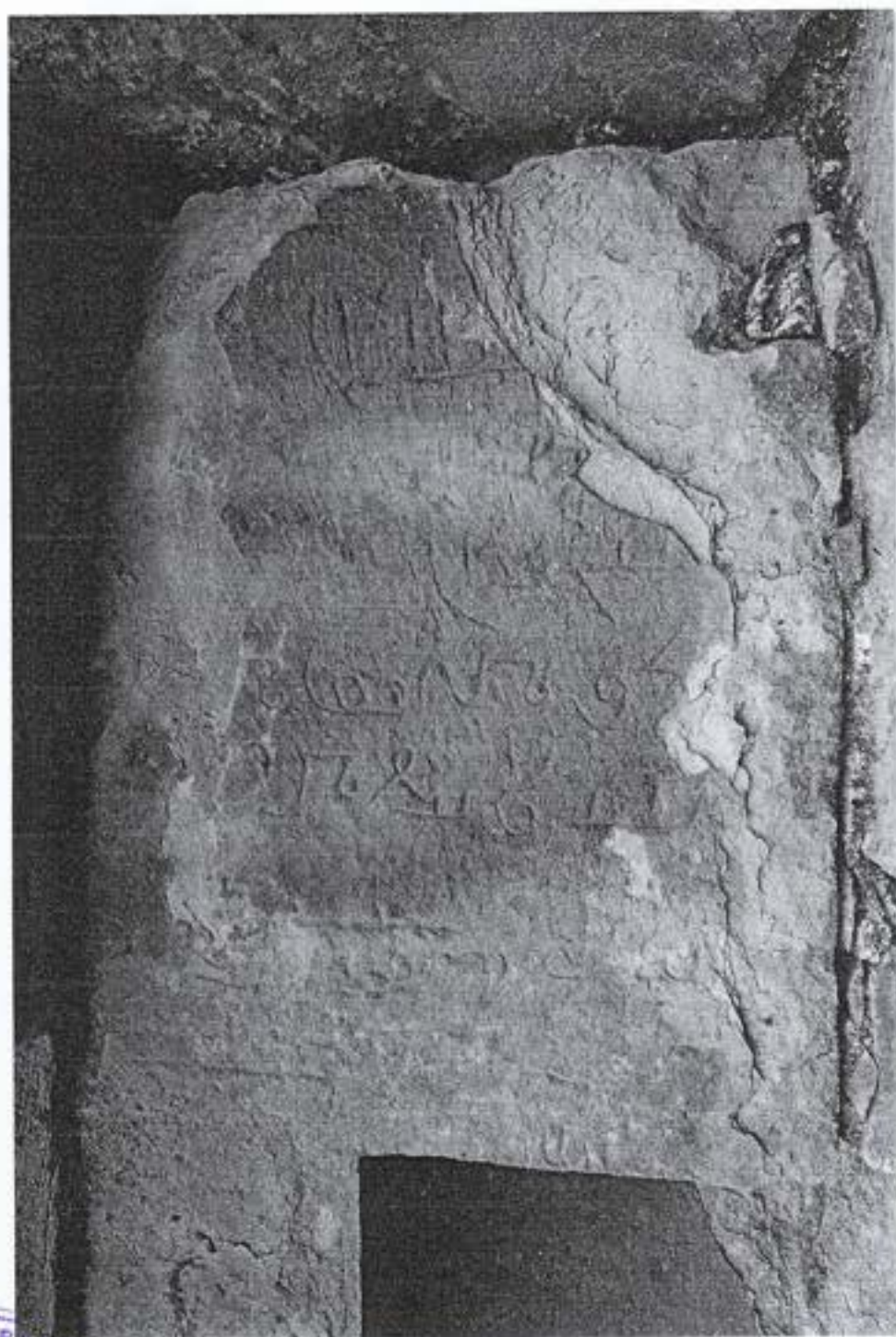
404-7
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Southwest Side: Inscription on wall



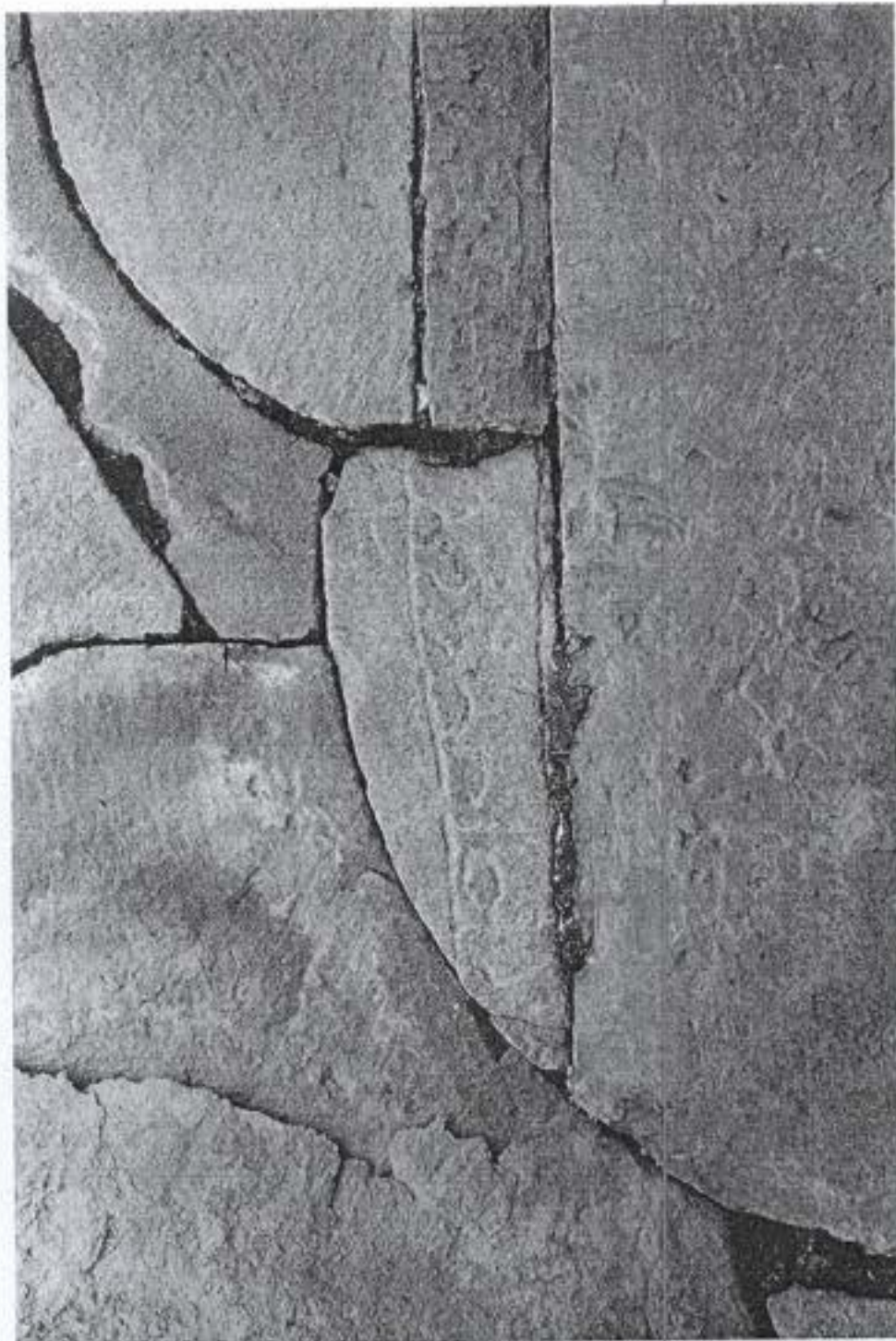
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Southwest Side: Inscription on wall



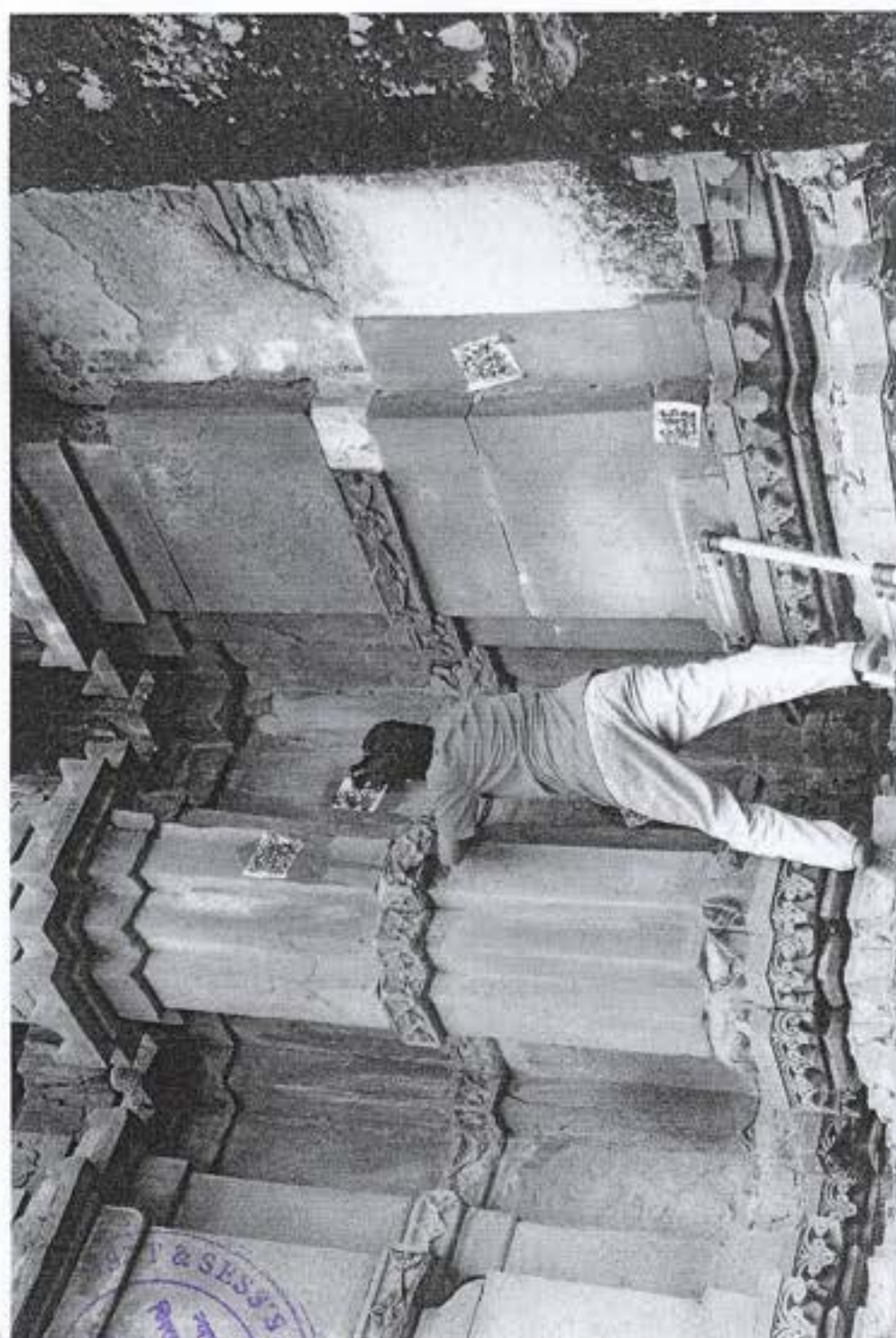
404
796



Southwest Side: Inscription on wall

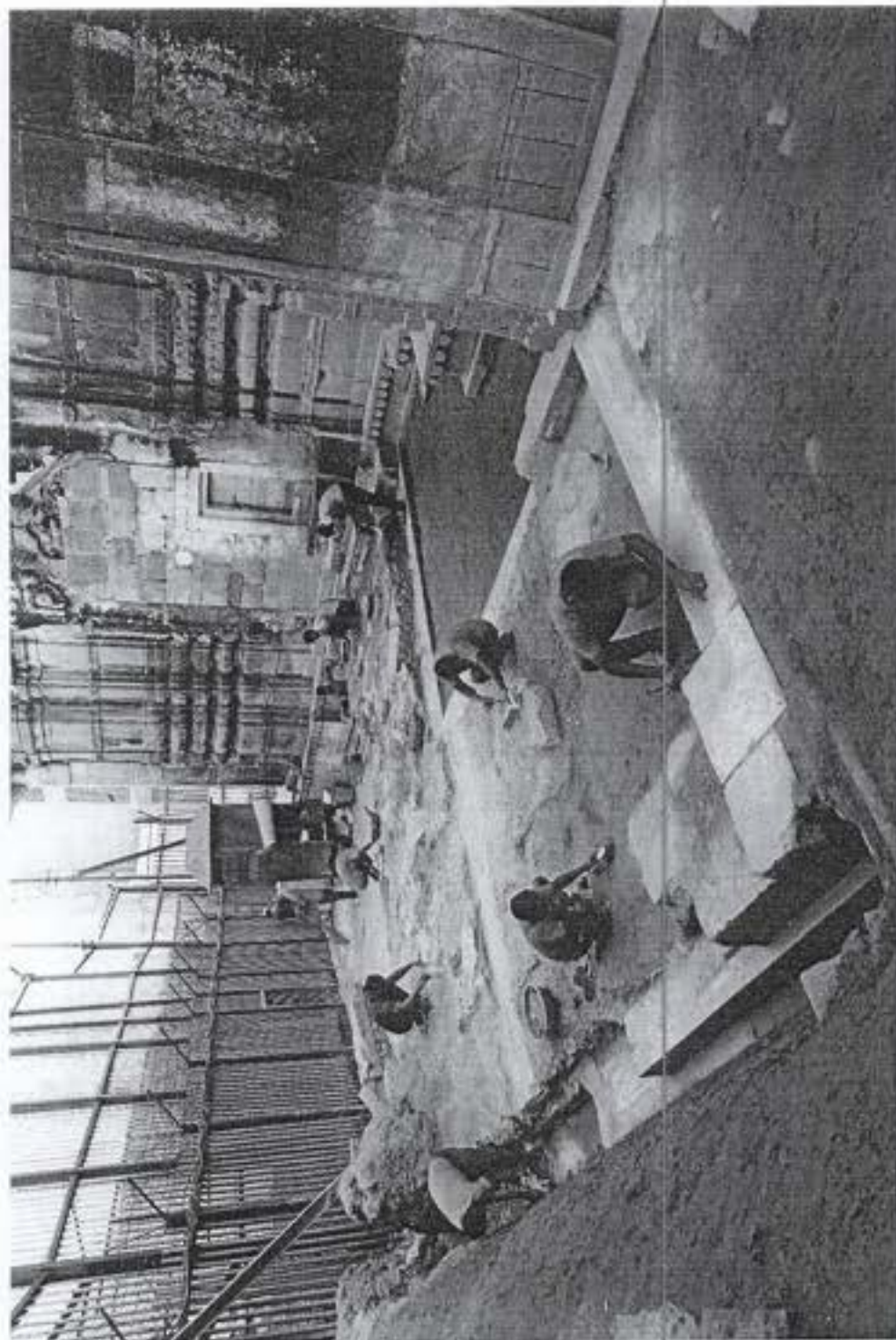


40451
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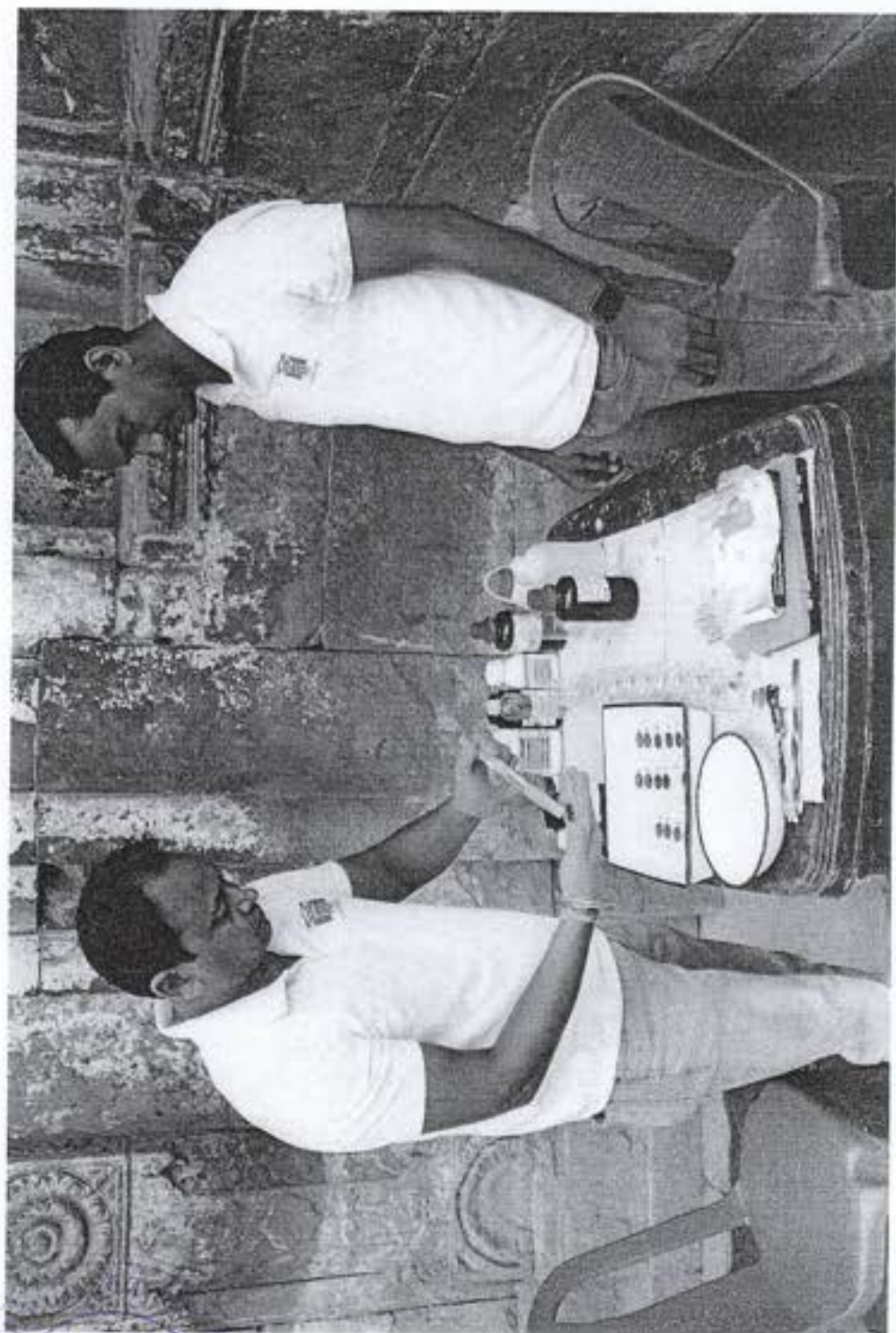
Southwest Side: Copying marks



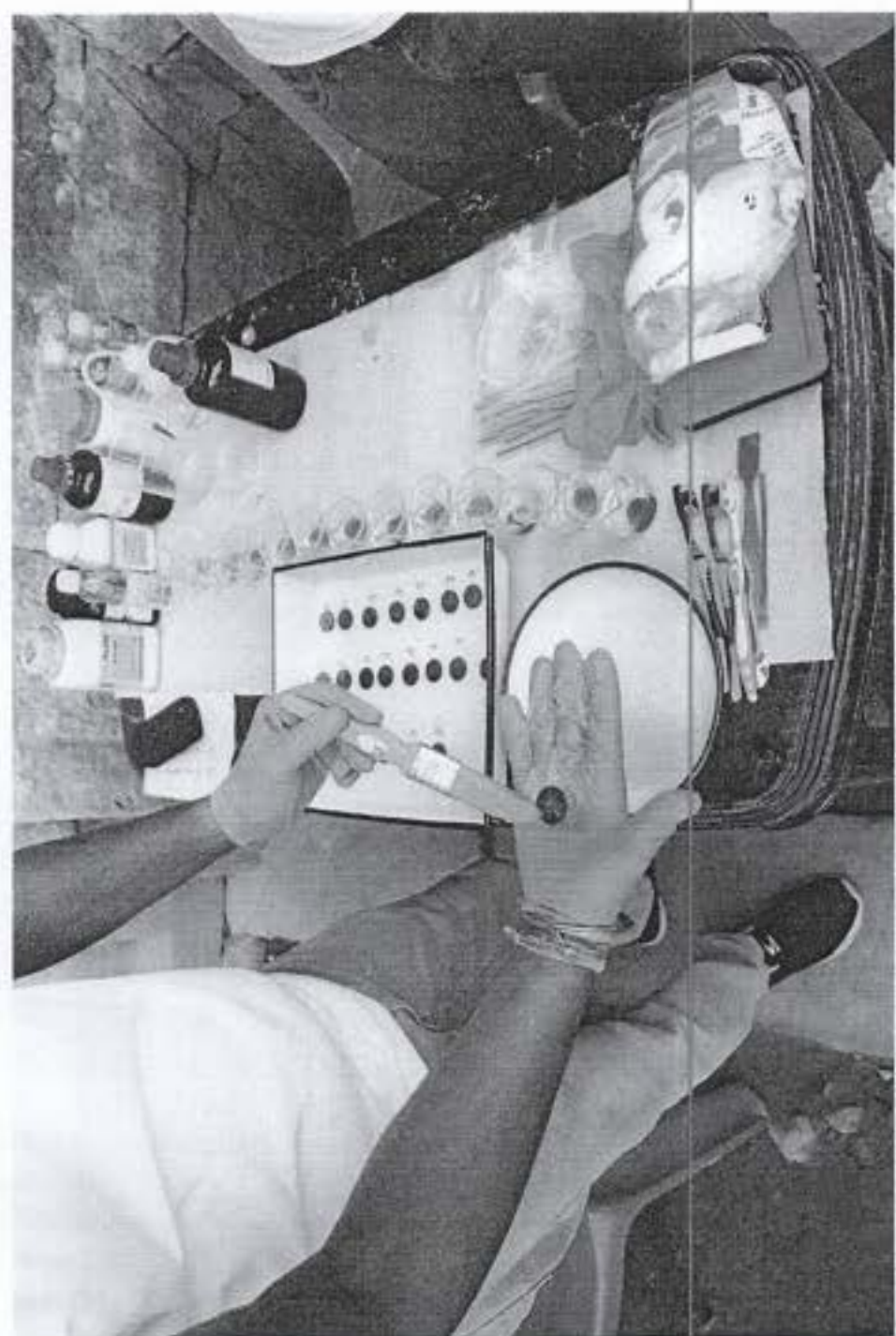


Northwest Side: Cleaning of structures

404
798

$$\frac{4045}{799}$$


Field Lab: Chemical treatment of finds



Field Lab: Chemical treatment of finds

4045
800

4045
201



Scientific Study: XRF analysis





Documentation of finds

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Documentation of finds

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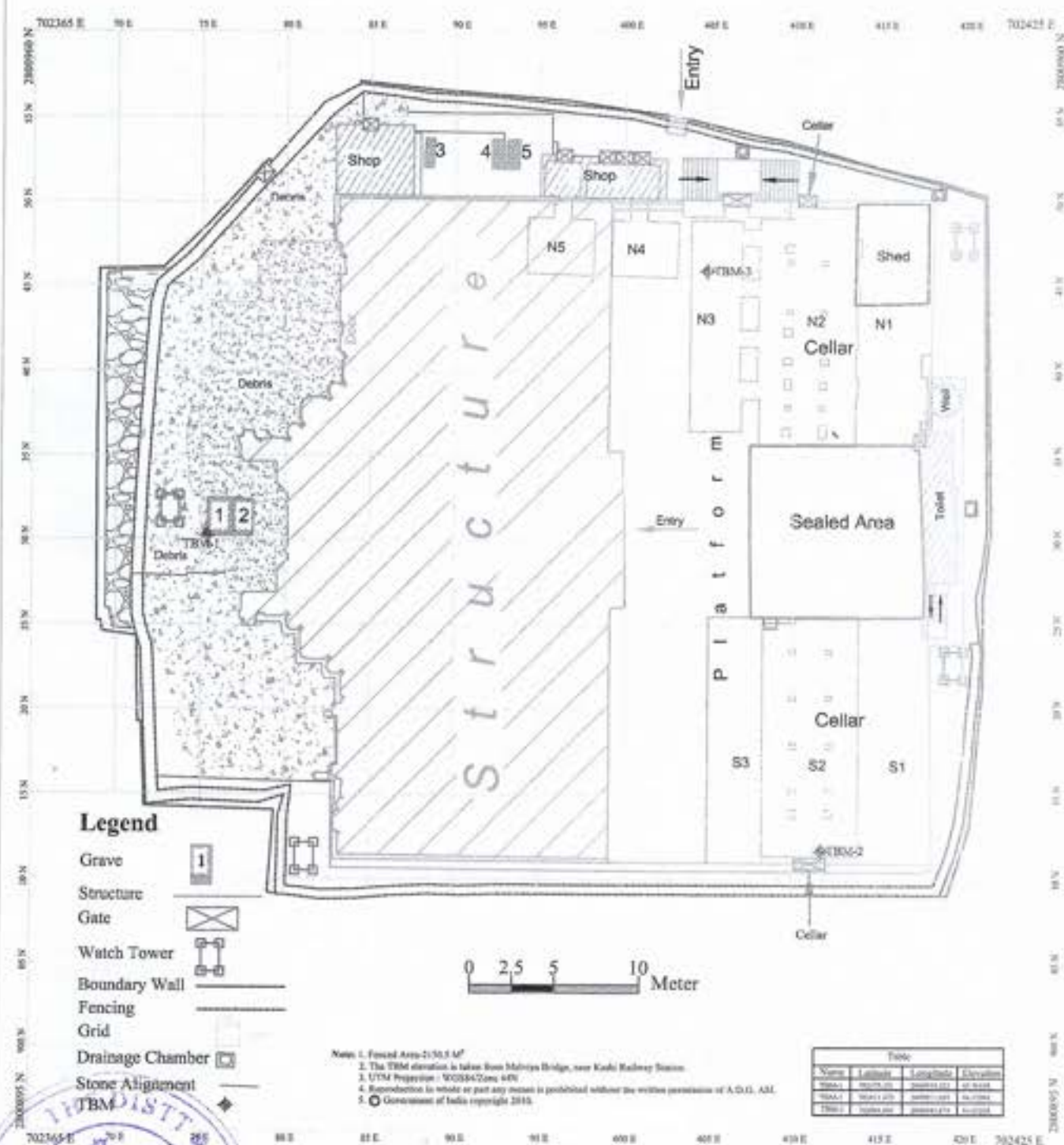


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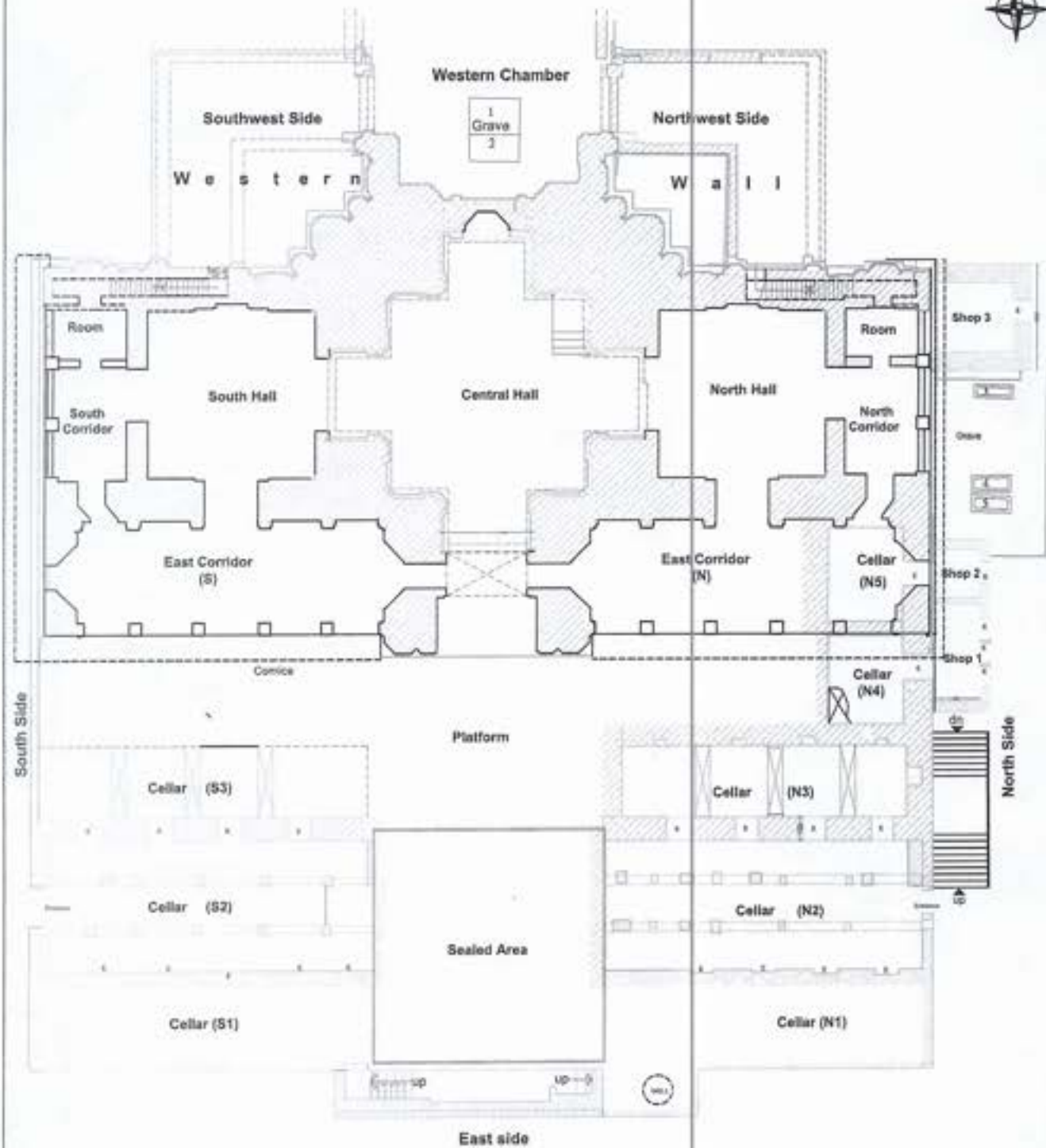
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807

Settlement Plot No. 9130, Varanasi Site Plan



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808

Settlement Plot No. 9130, Varanasi Study Area



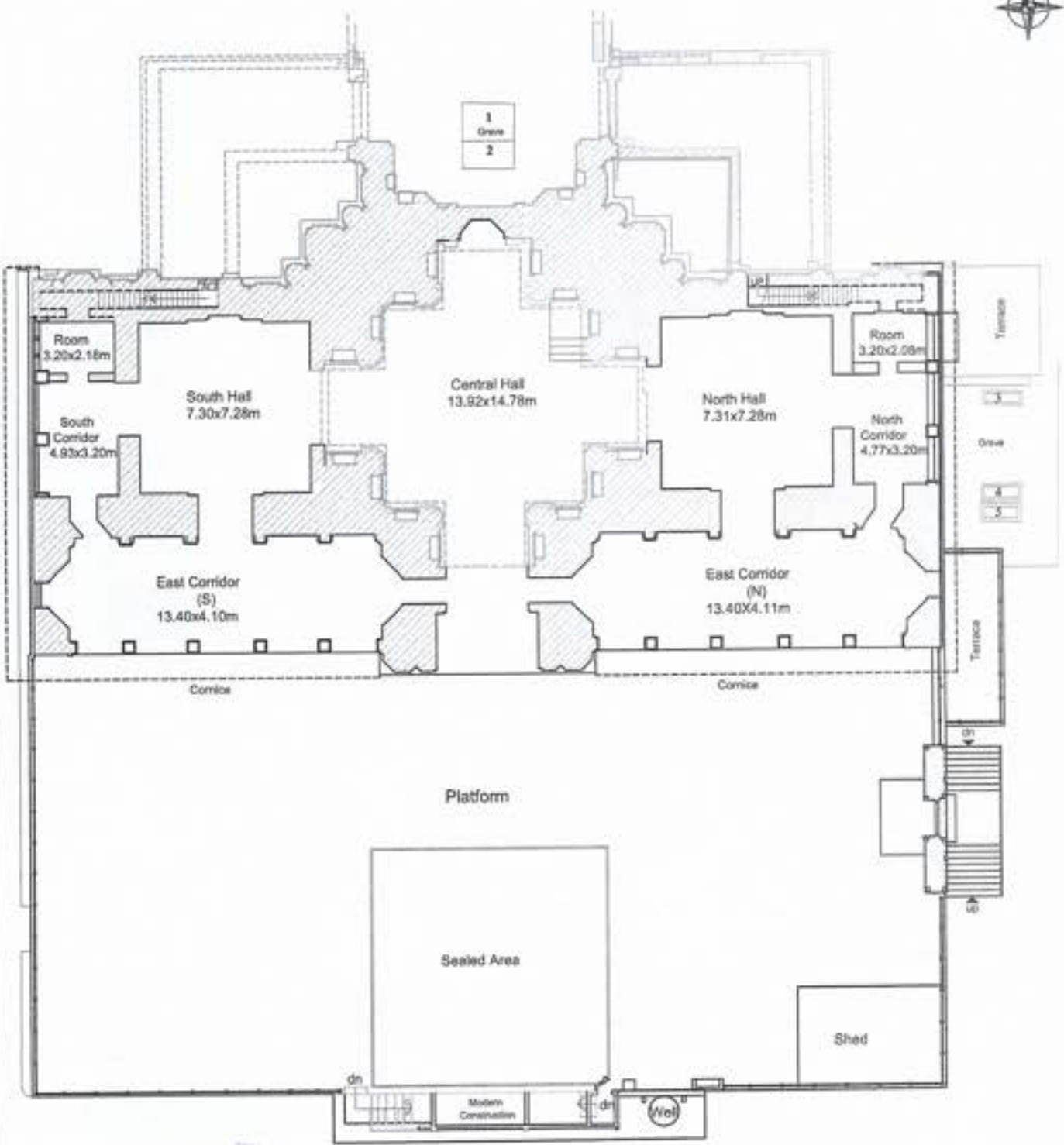
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Stone Masonry	
Brick Masonry	
Pre Existing Structure	
Existing Structure	



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Settlement Plot No. 9130, Varanasi
Plan of Structure at Level 2

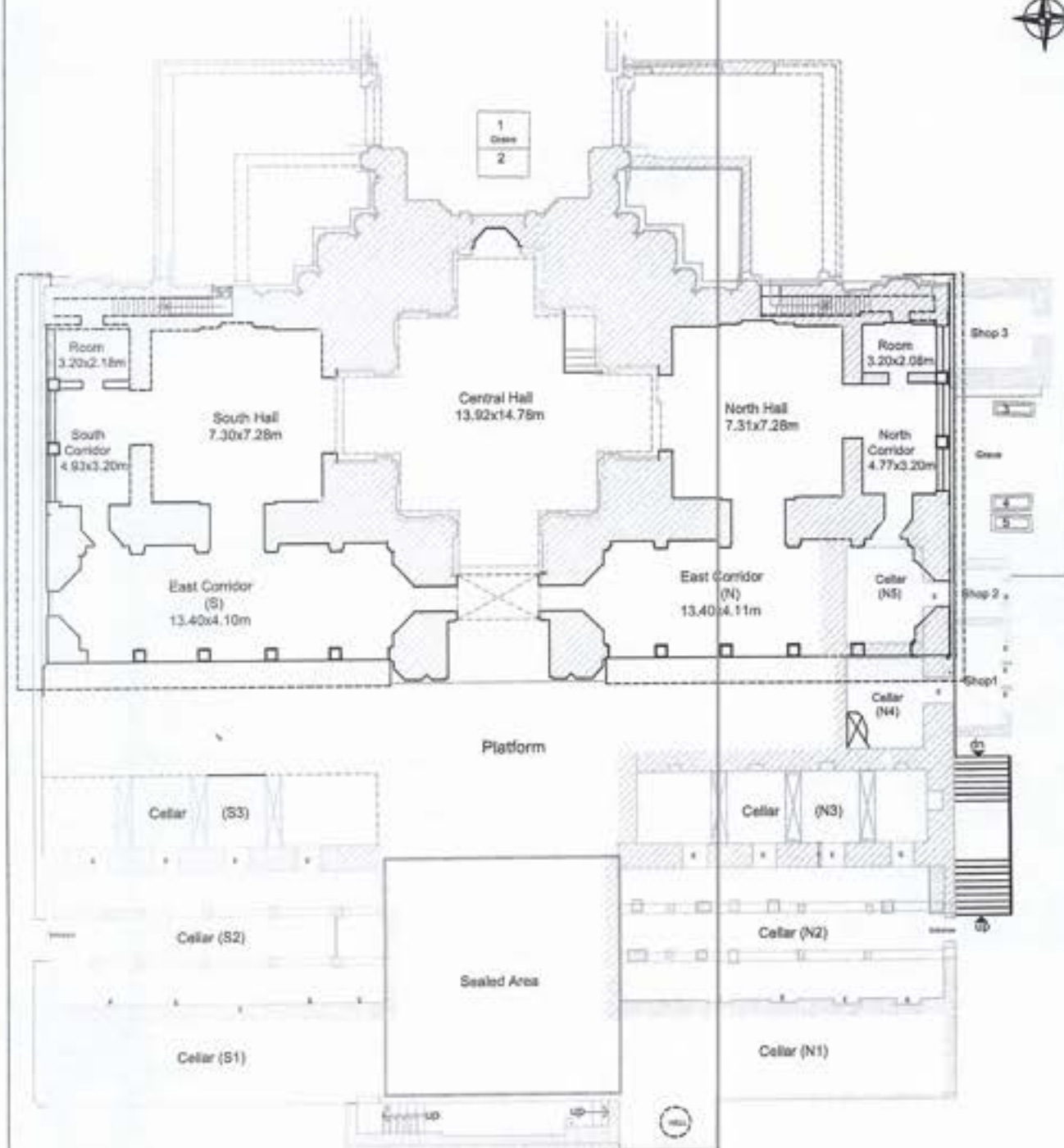


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Stone Masonry	
Brick Masonry	
Pre Existing Structure	
Existing Structure	
Railing	

404T
8101

Settlement Plot No. 9130, Varanasi
Plan of Structure at Level 2 and Level 1



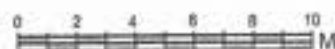
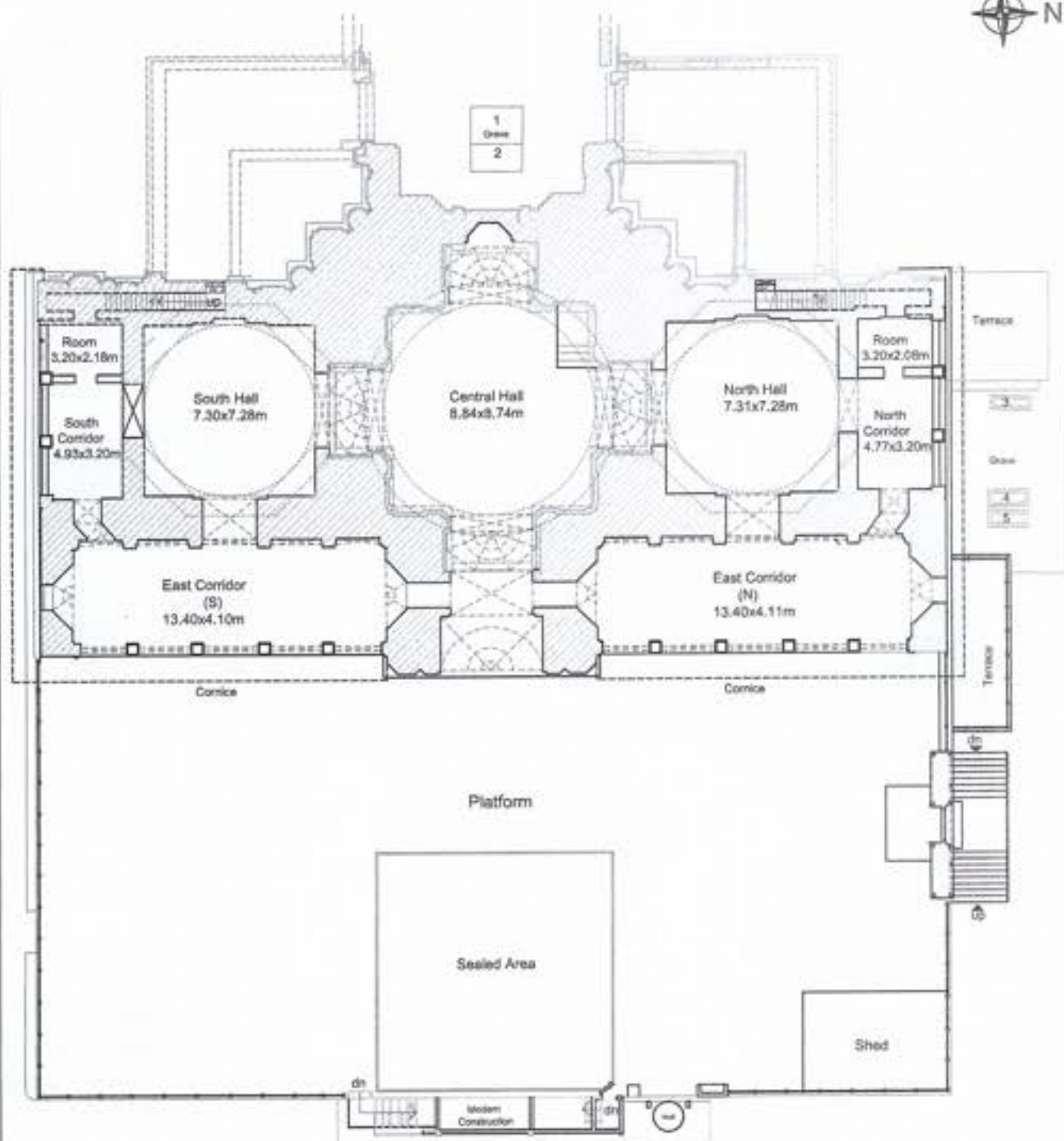
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Stone Masonry	
Brick Masonry	
Pre Existing Structure	
Existing Structure	



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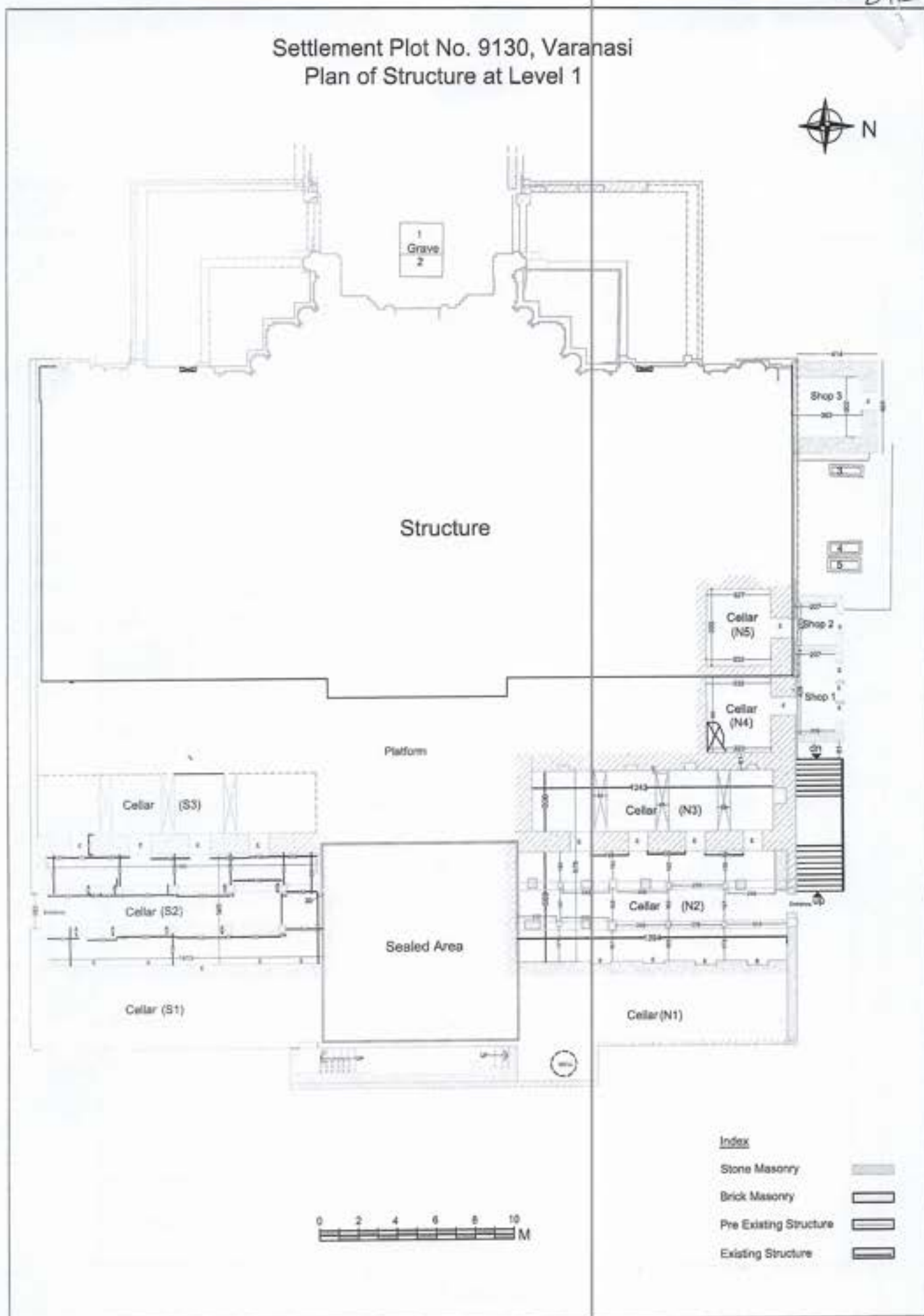
Settlement Plot No. 9130, Varanasi
Plan of Structure at Level 2 and Level 3



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Pre Existing Structure	
Existing Structure	
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812

Settlement Plot No. 9130, Varanasi Plan of Structure at Level 1





[Index](#)
[Stone Masonry](#)
[Brick Masonry](#)

$$\frac{404.5\pi}{2.13}$$

4045
814

Settlement Plot No. 9130, Varanasi
Plan of Structure at Level 1



Settlement Plot No. 9130, Varanasi Plan of Structure at Level 1



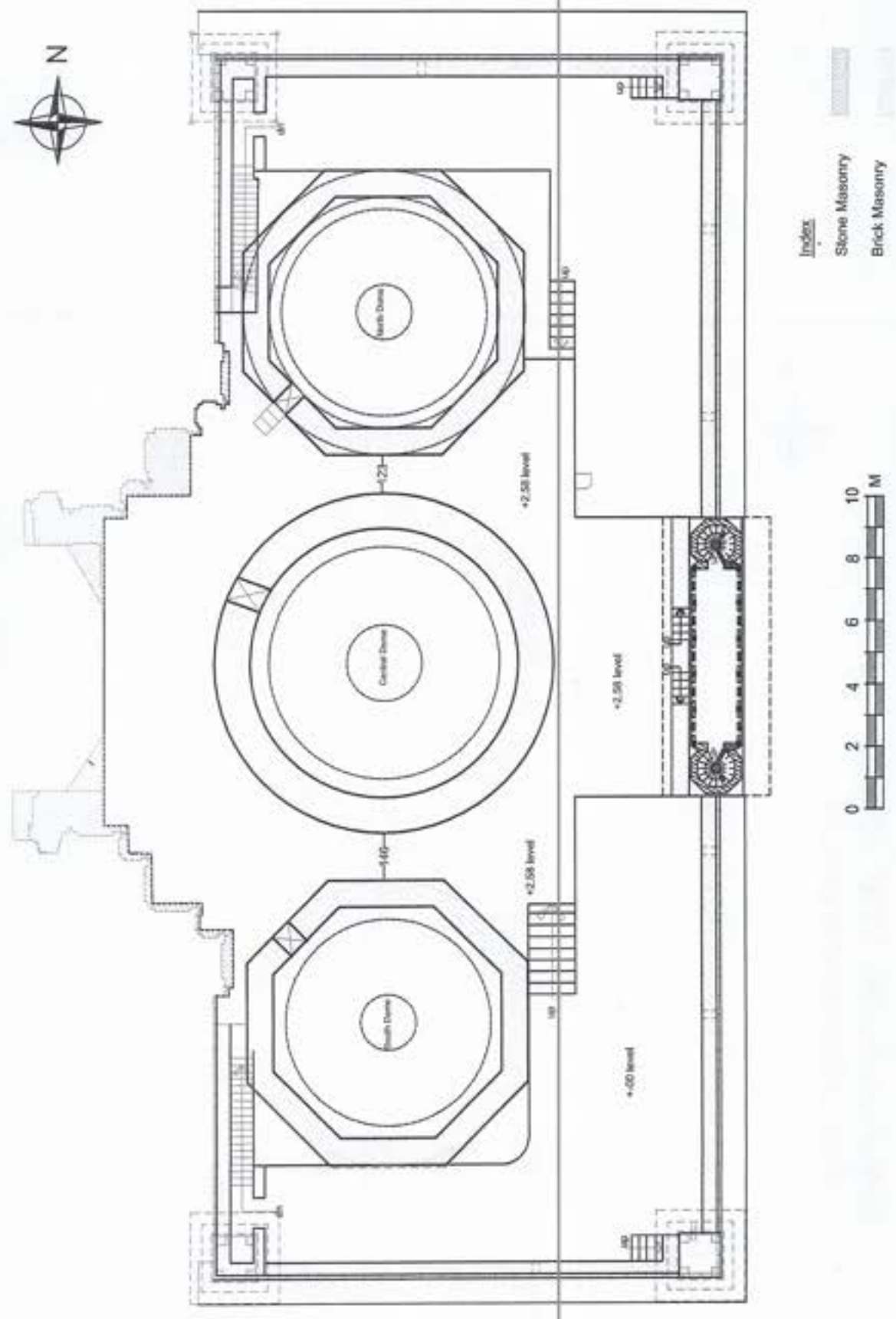
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Stone Masonry
Brick Masonry



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815

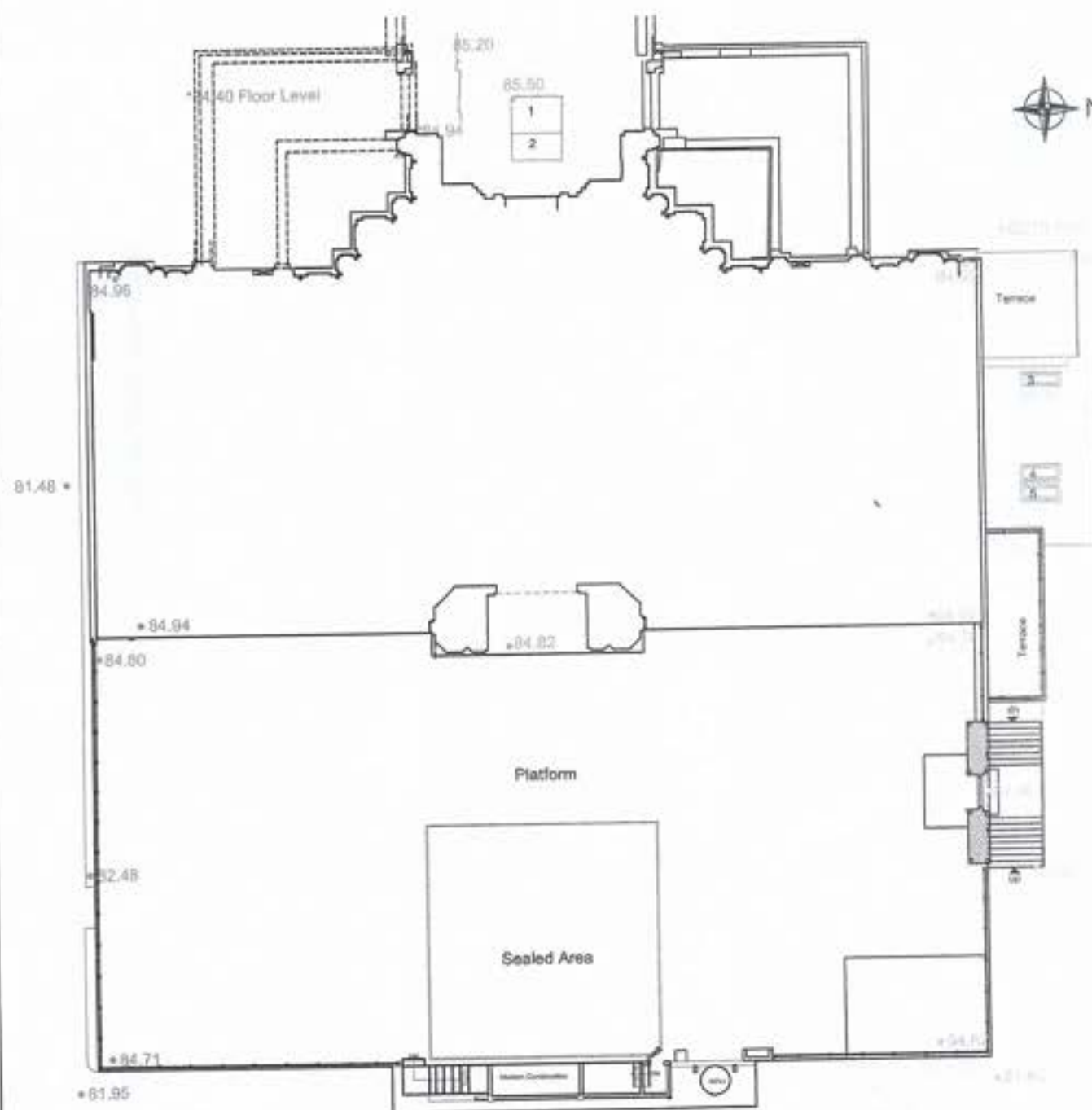
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816

Settlement Plot No. 9130, Varanasi
Plan of Structure at Level 3



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817

Settlement Plot No. 9130, Varanasi
Height of Structure from MSL

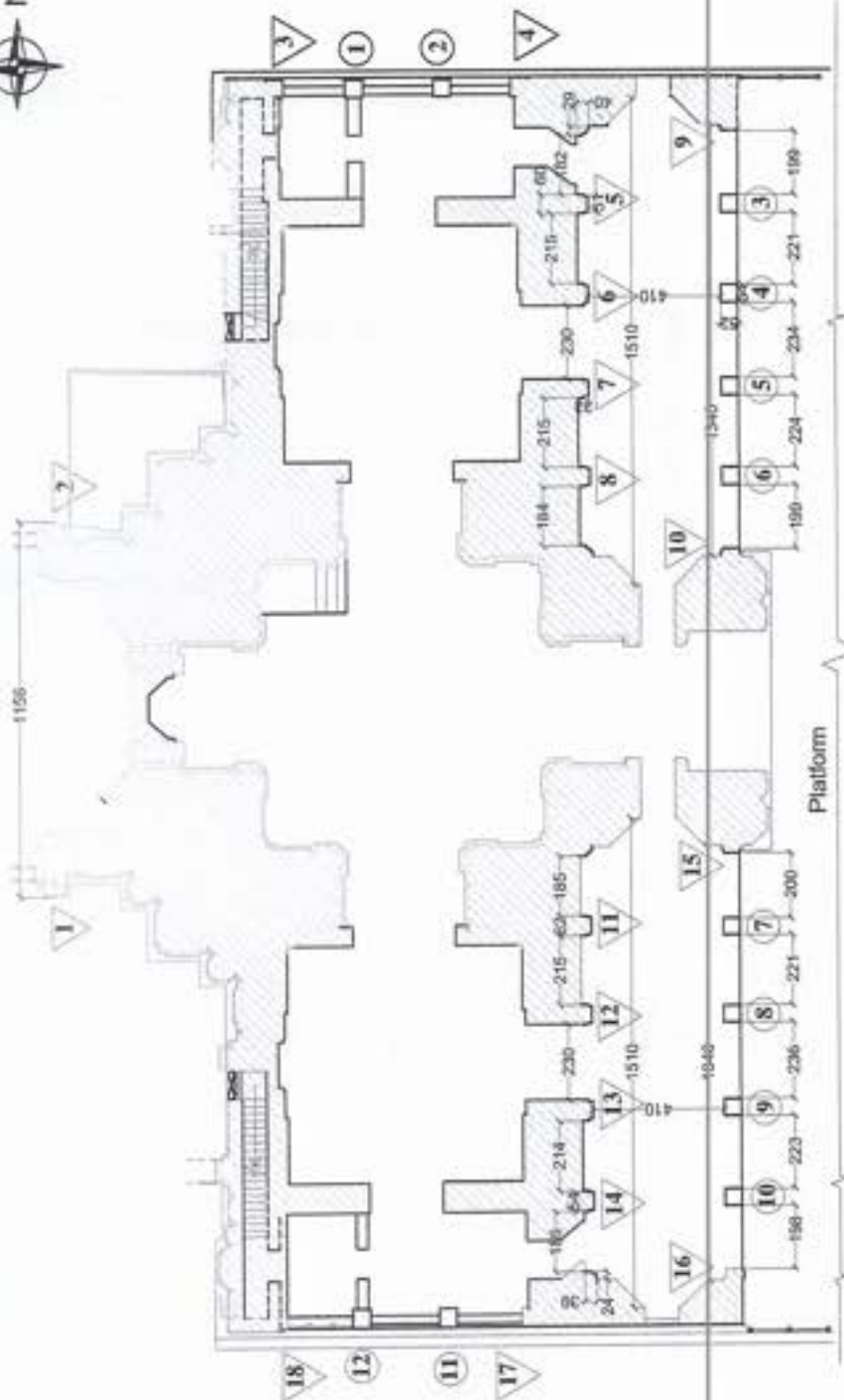


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Settlement Plot No. 9130, Varanasi
Location of Pillars and Pilasters



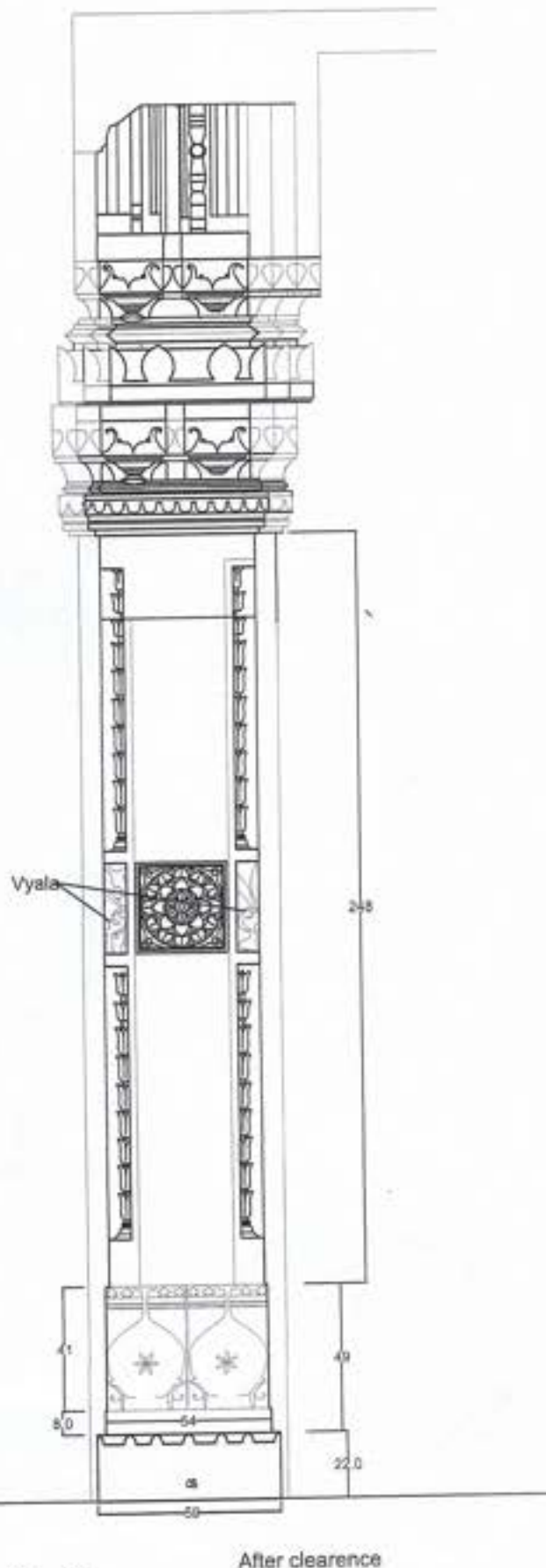
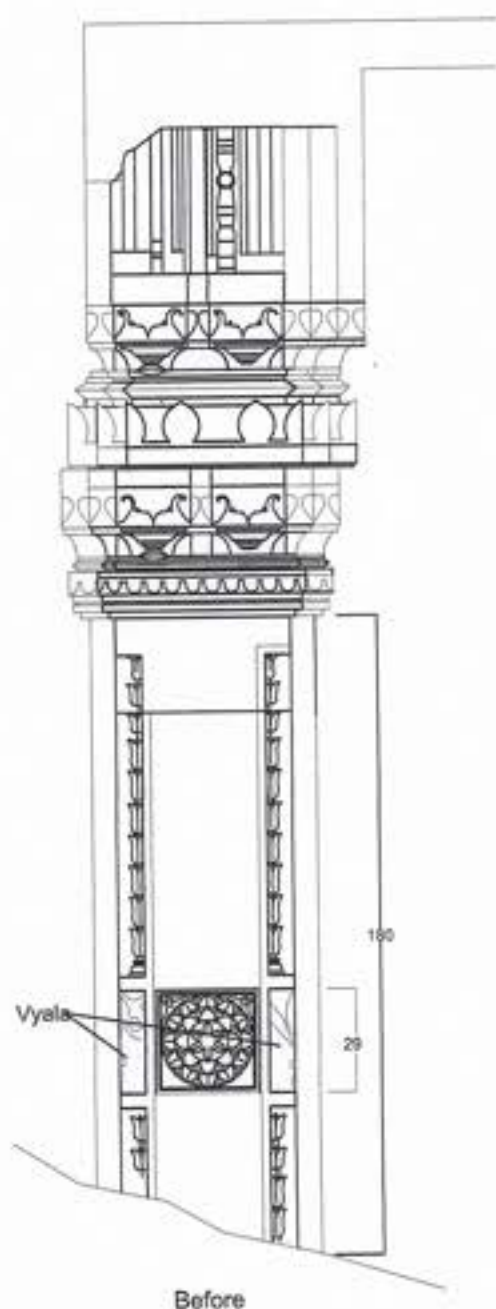
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404T
818

Western Chamber
Pilaster No. 2
(Facing North)

404-7T
819

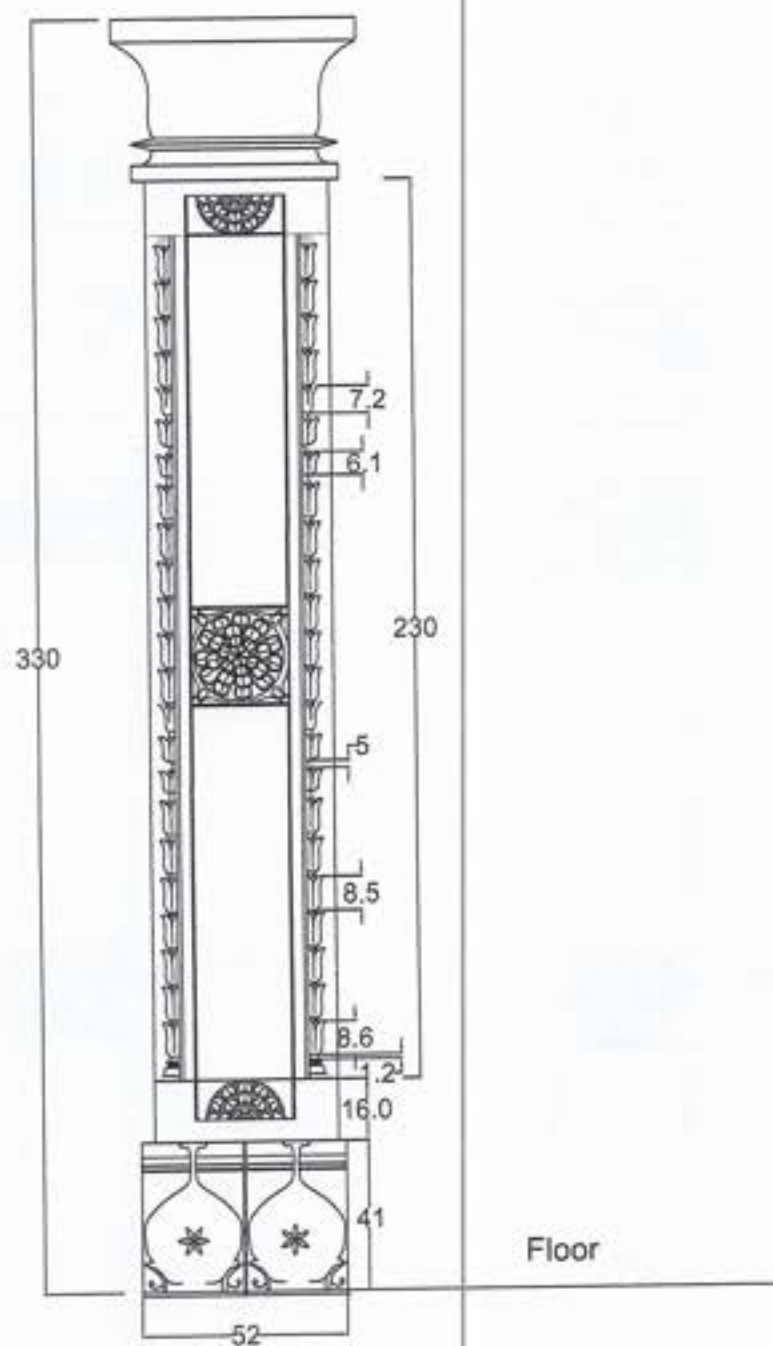


0 20 40 60 CM



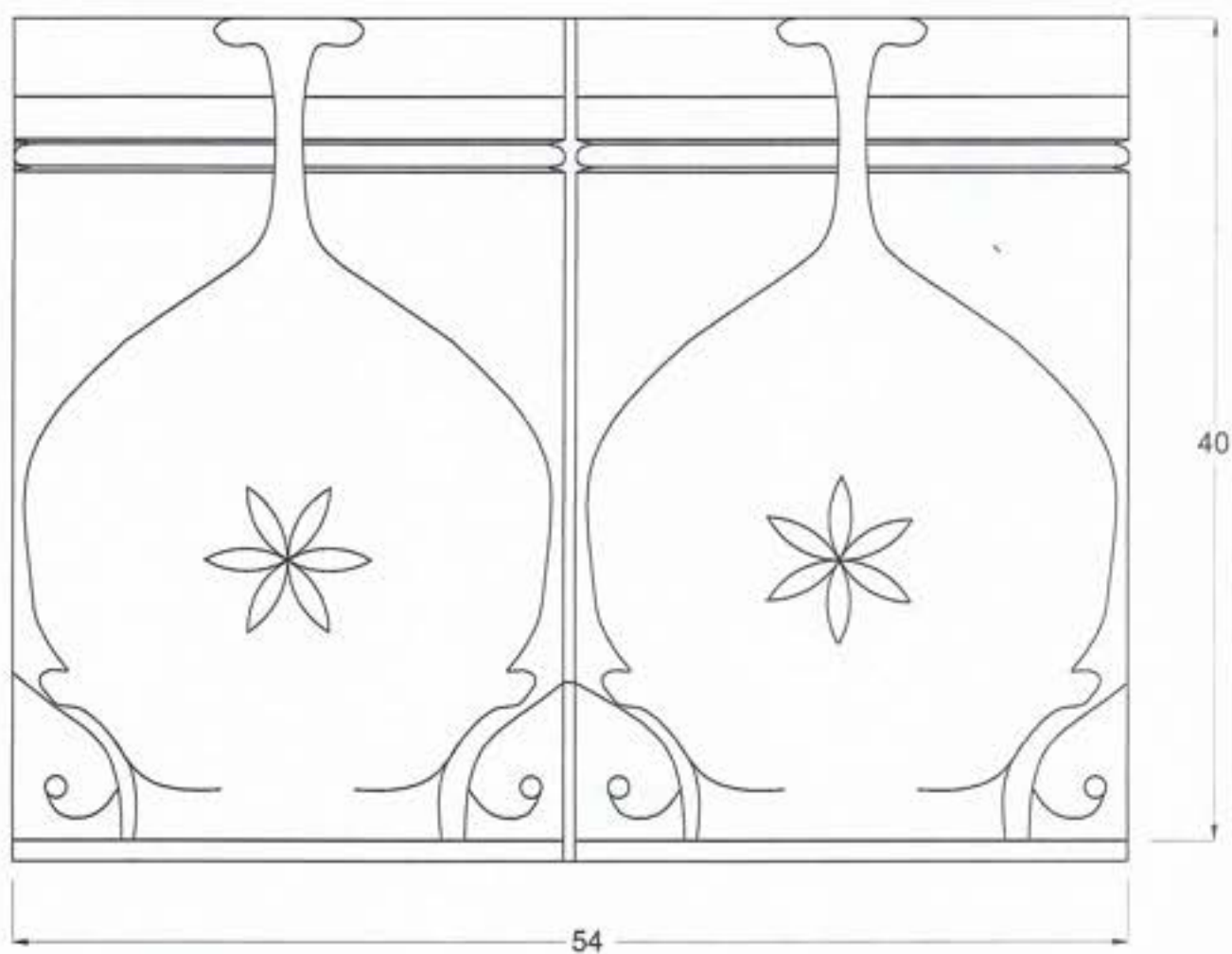
4045
820

Pillar No. 4 (Facing South)



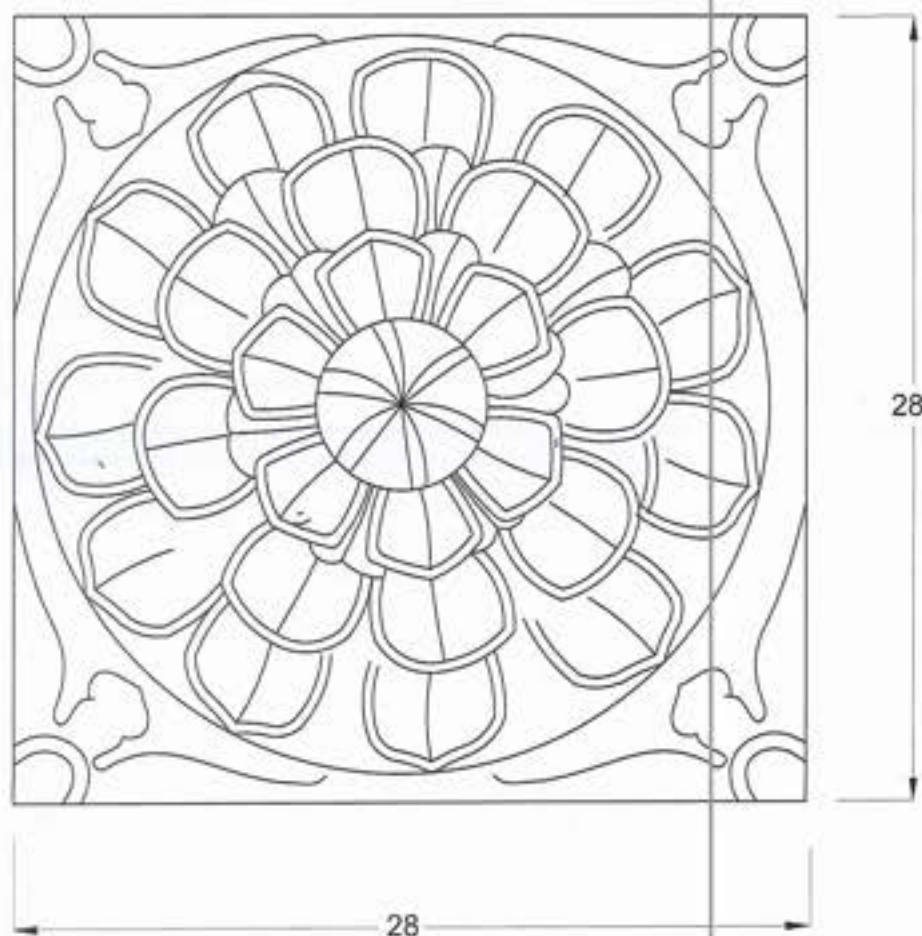
4045T
821

Pillar No. 4
(Facing East)
Decorated Pillar Base



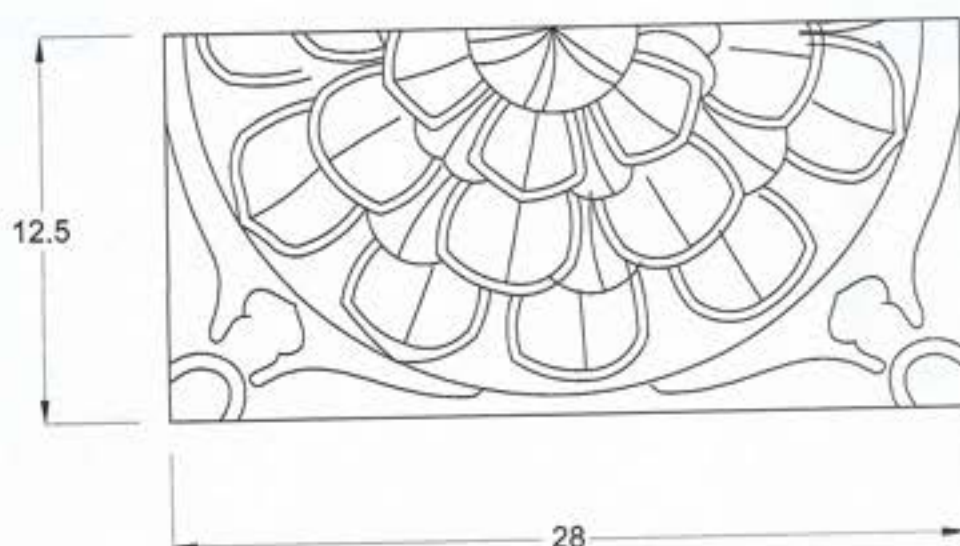
4045
822

Pillar No. 4
(Facing East)
Lotus Medallion

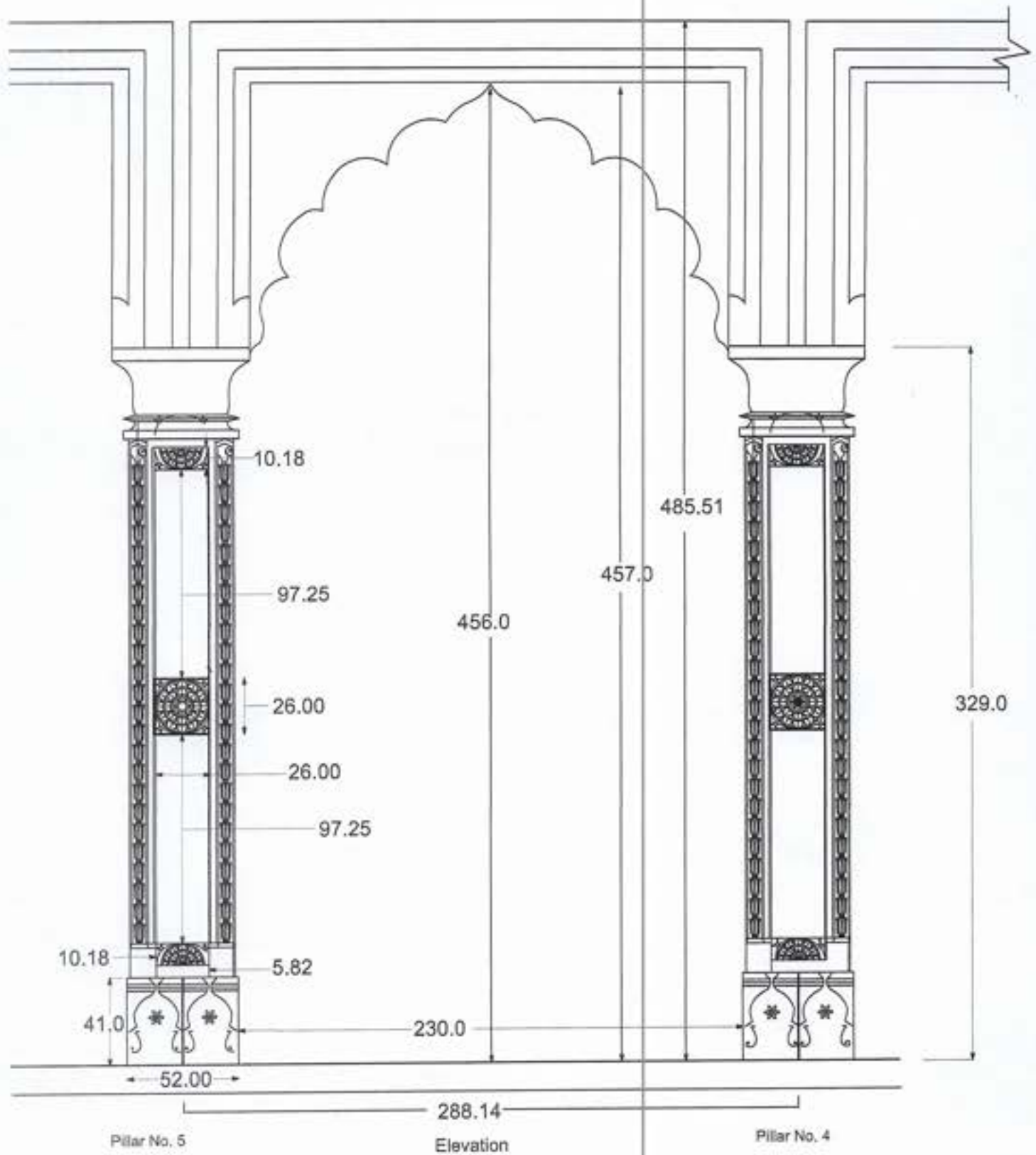


4045
823

Pillar No. 4
(Facing East)
Half Lotus Medallion on Top



Pillars 4 and 5
(Facing East)

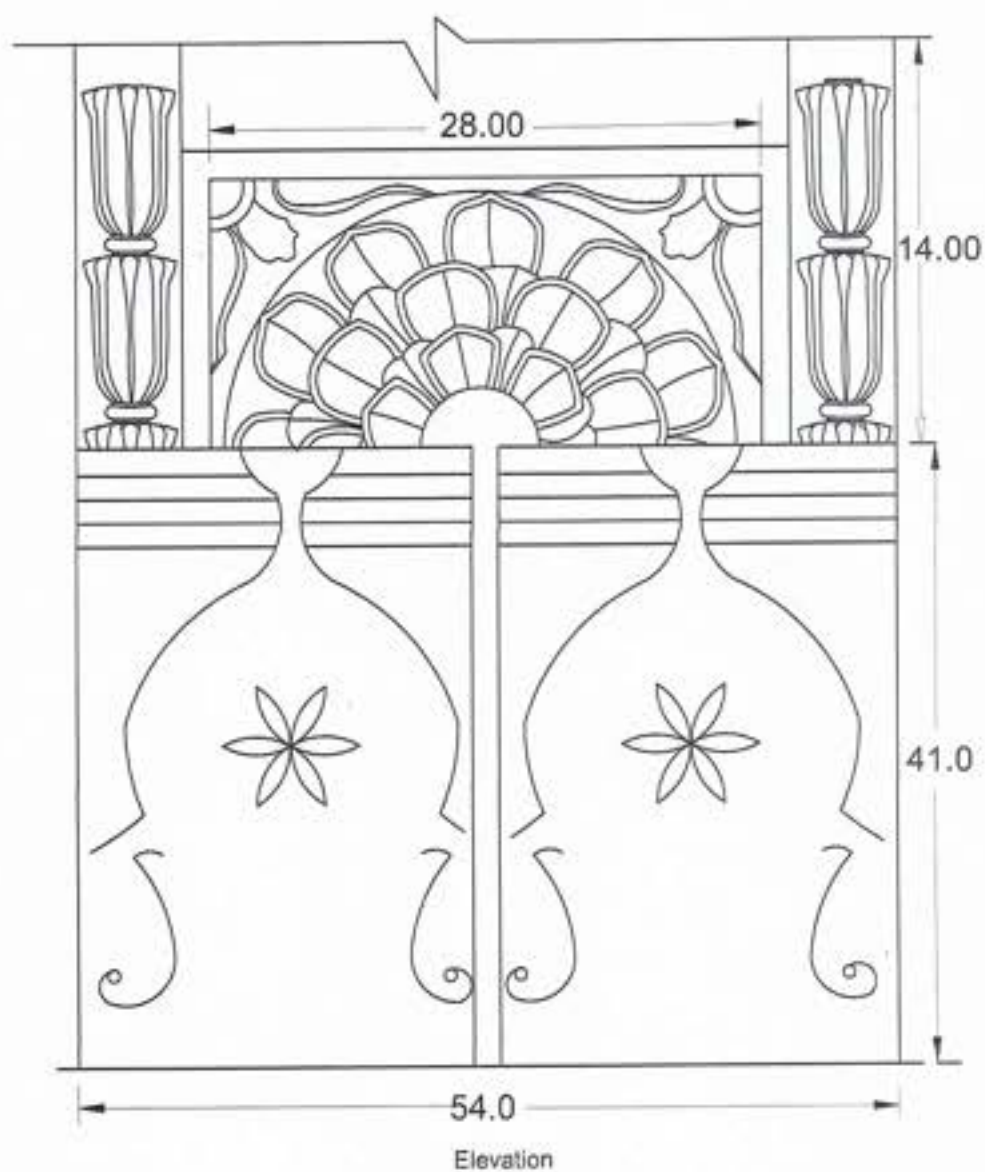


A scale bar with markings at 0, 20, 40, 60, 80, and 100, followed by the unit 'CM'.



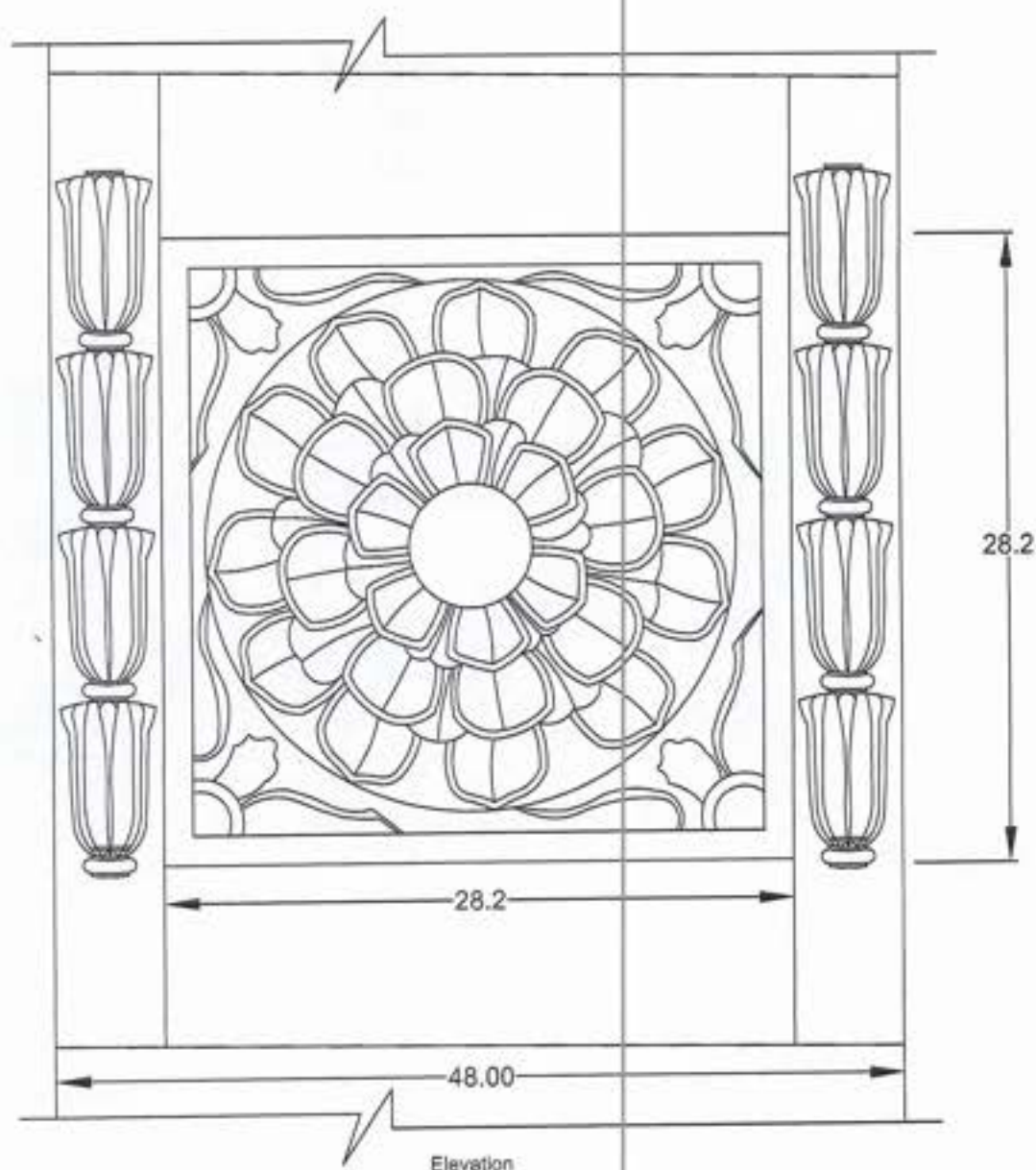
4045T
225

Pillar No. 5
(Facing East)
Decorative Pillar Base



404-7
826

Pillar No. 5
(Facing East)
Lotus Medallion

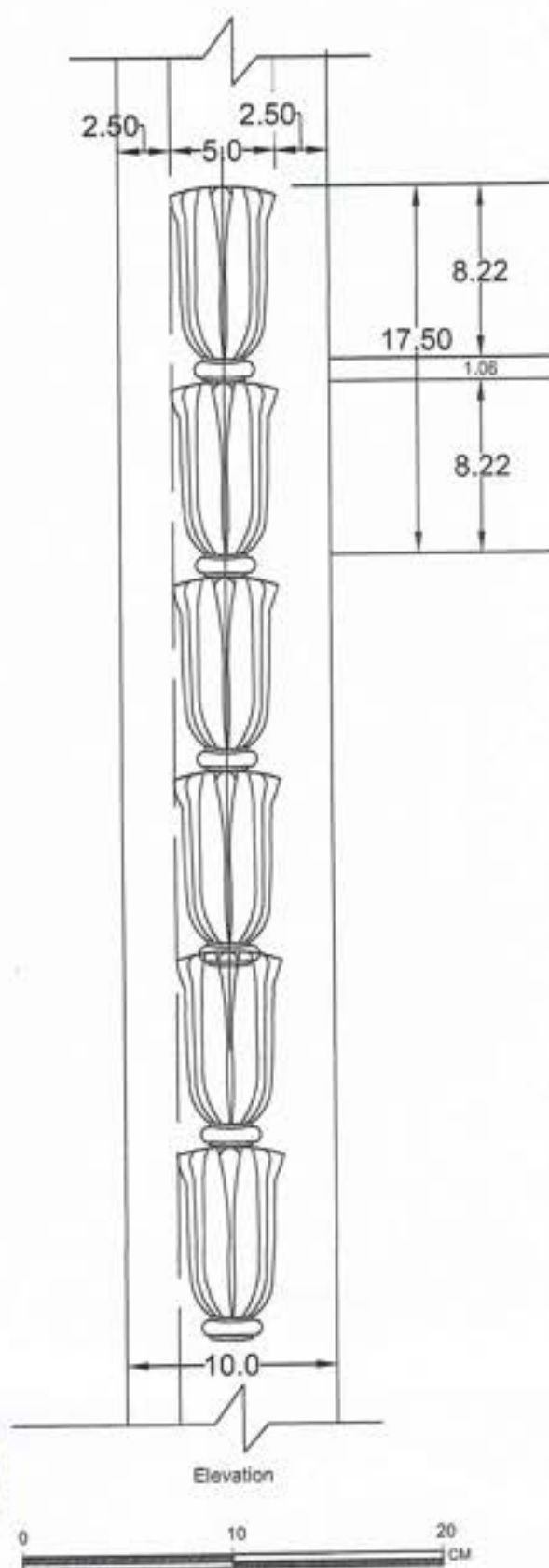


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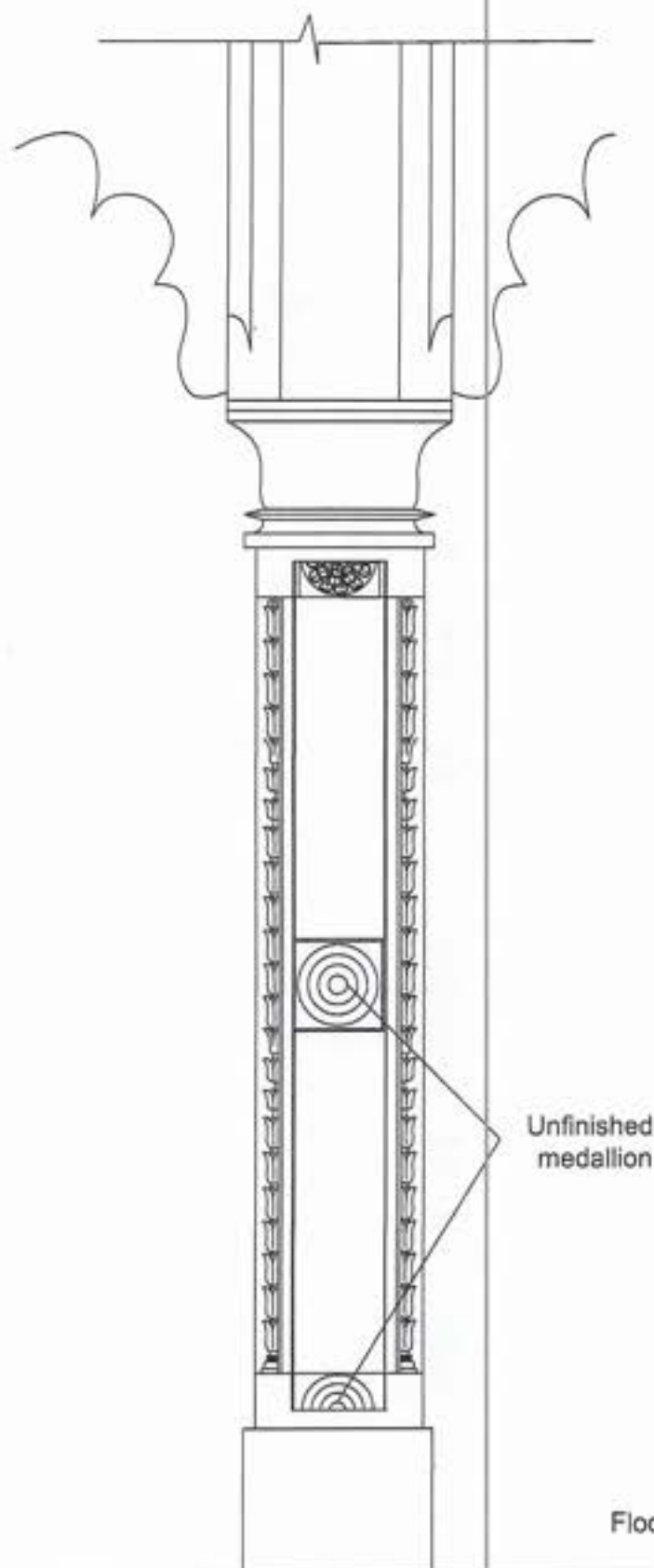
4e45T
827

Pillar No. 6
Lotus Bud Chain
(Northeast Corner)



Pillar No. 7
(Facing West)

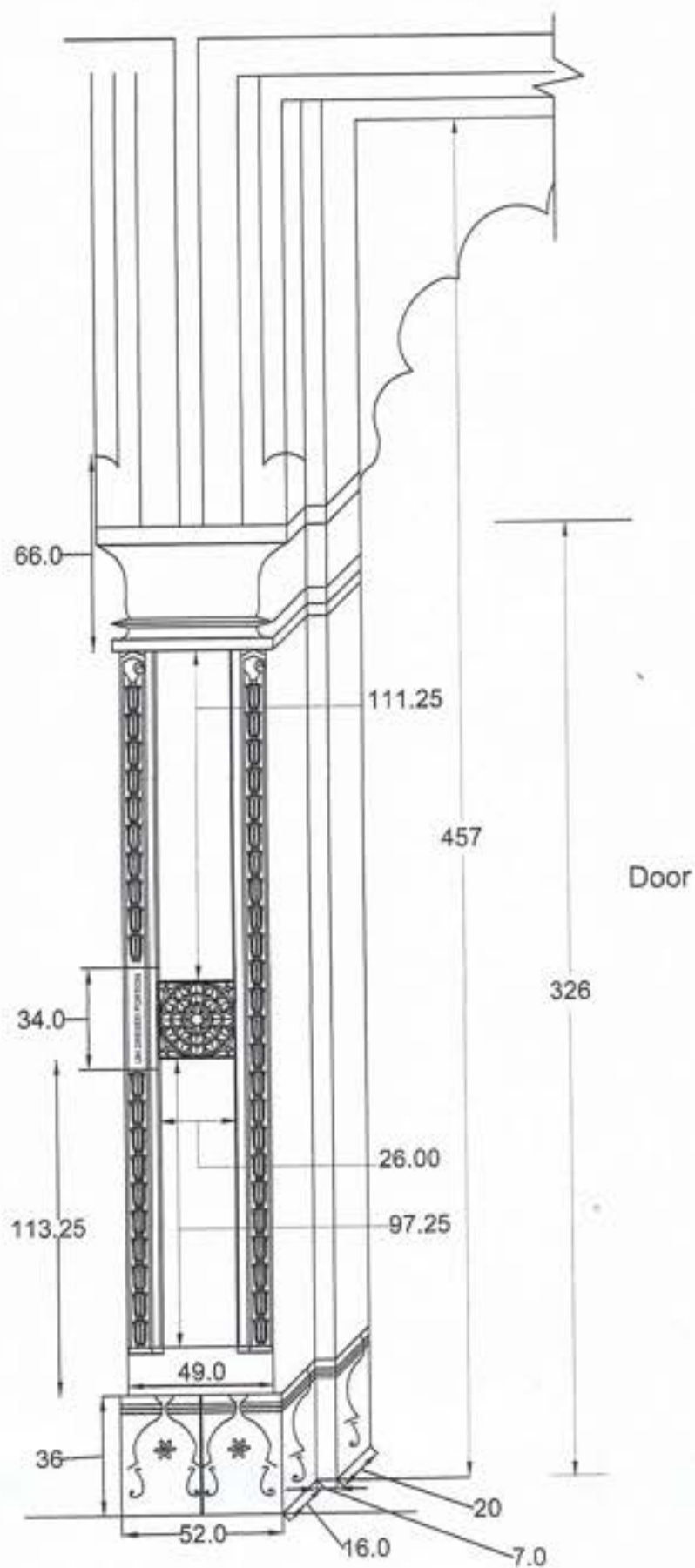
404π
828



0 20 40 60
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Pilaster No.7
(Facing East)

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829

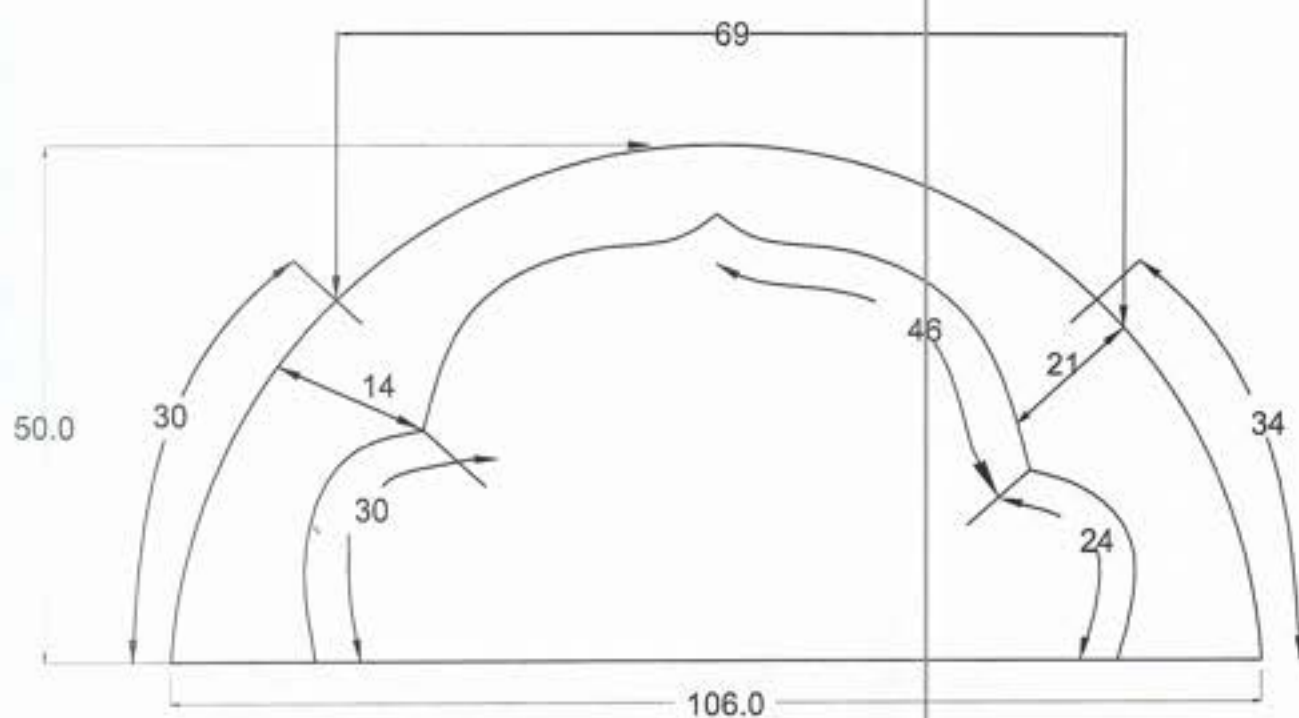


Elevation



4043T
830

Arabic Inscription on Stone Slab (Kept in Lower Room of South Corridor)

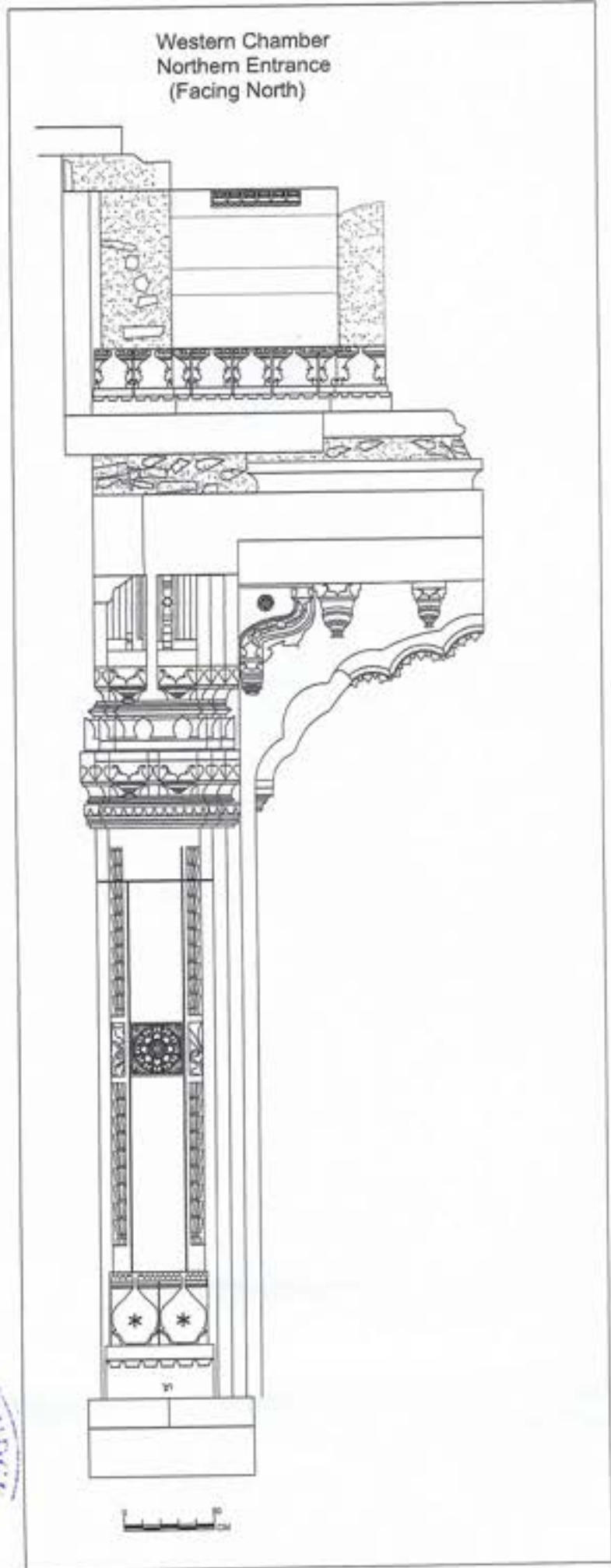


Dimensions in Centimeter



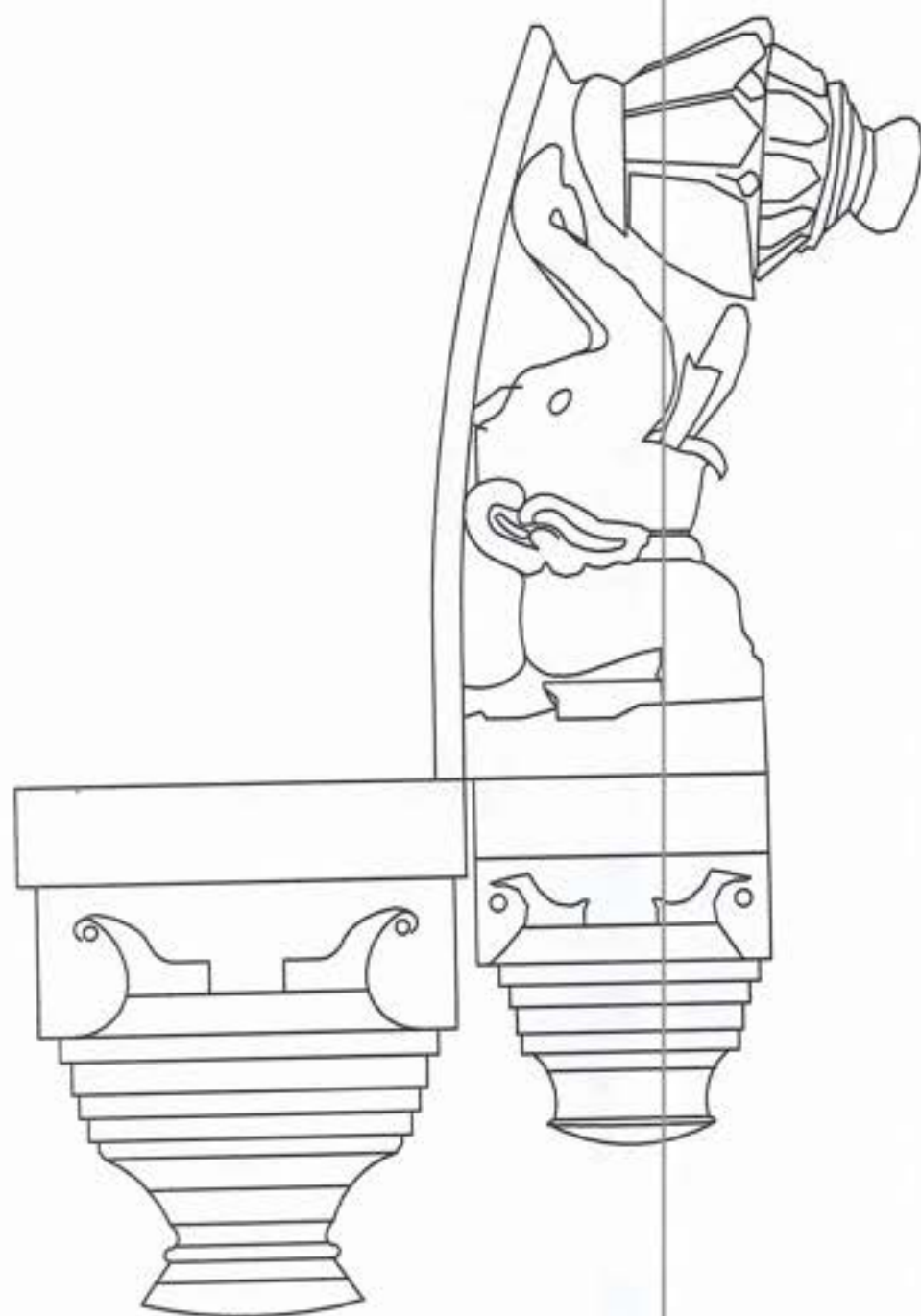
4045
231

Western Chamber
Northern Entrance
(Facing North)



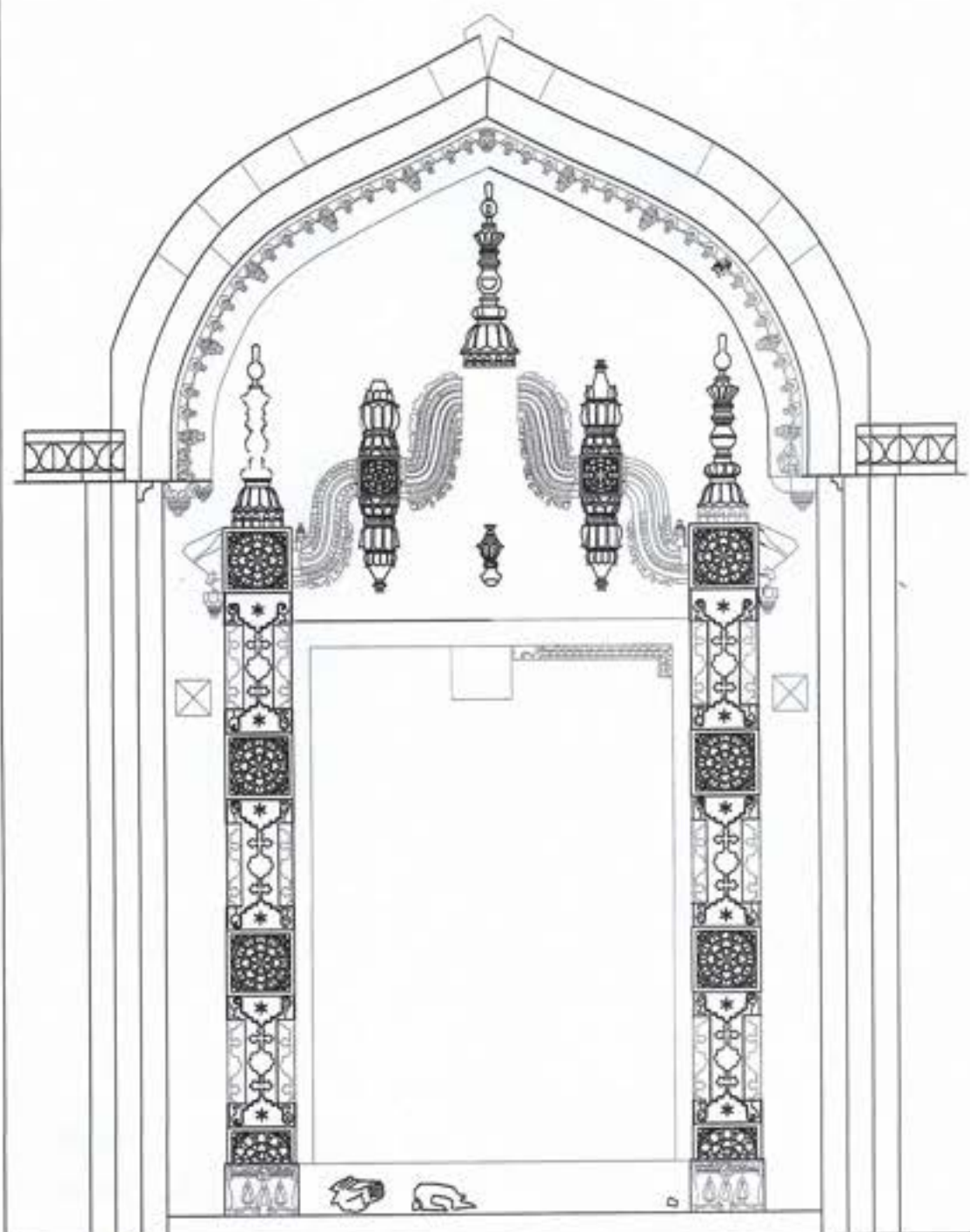
Western Chamber
Elephant on Upper Arch of Southern Entrance
(Facing North)

404T
832



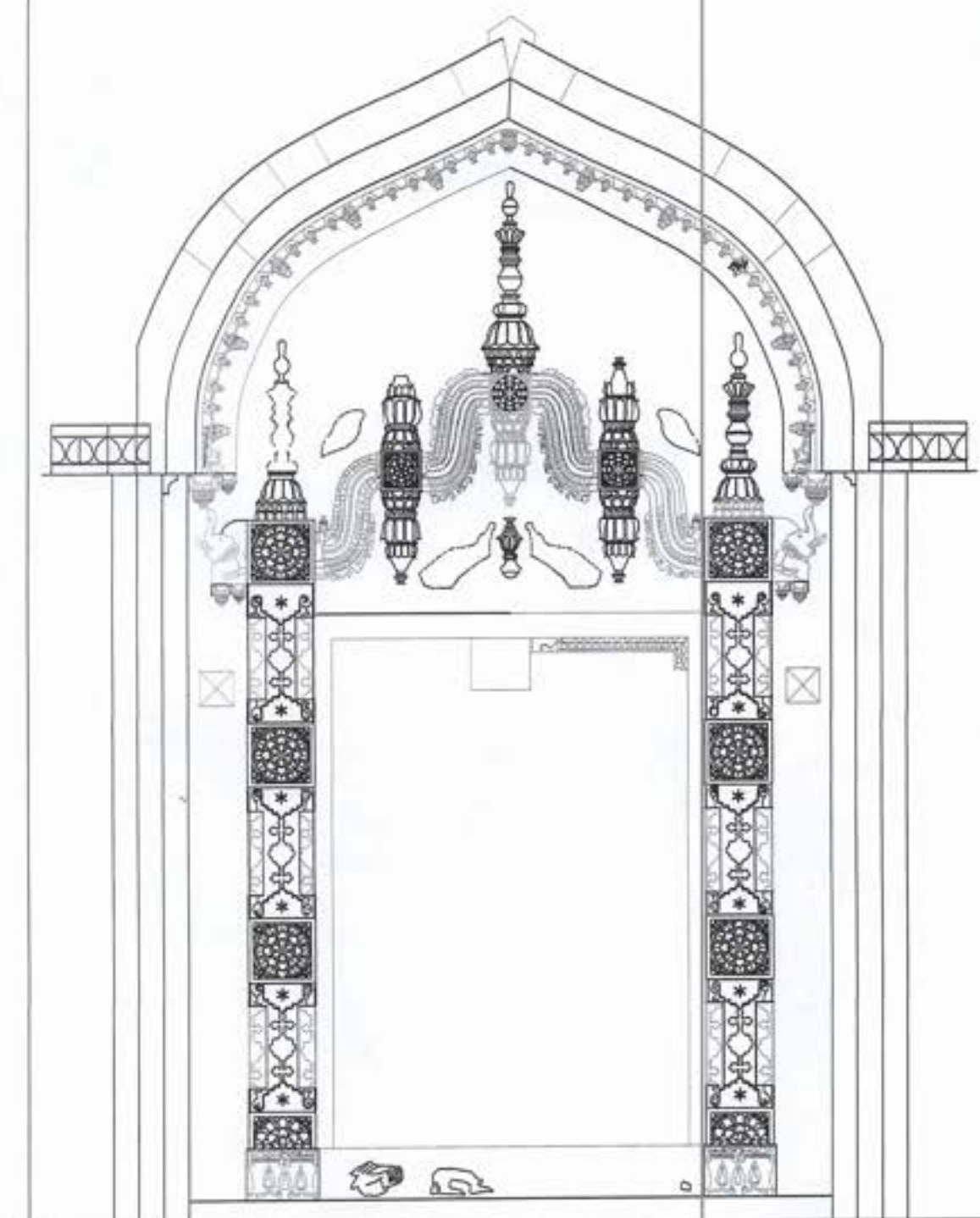
Western Chamber
Entrance to Central Hall
(Facing West)

40451
833



Western Chamber
Entrance to Central Hall
(Facing West)
(Showing Mutilated Figures)

4045T
834



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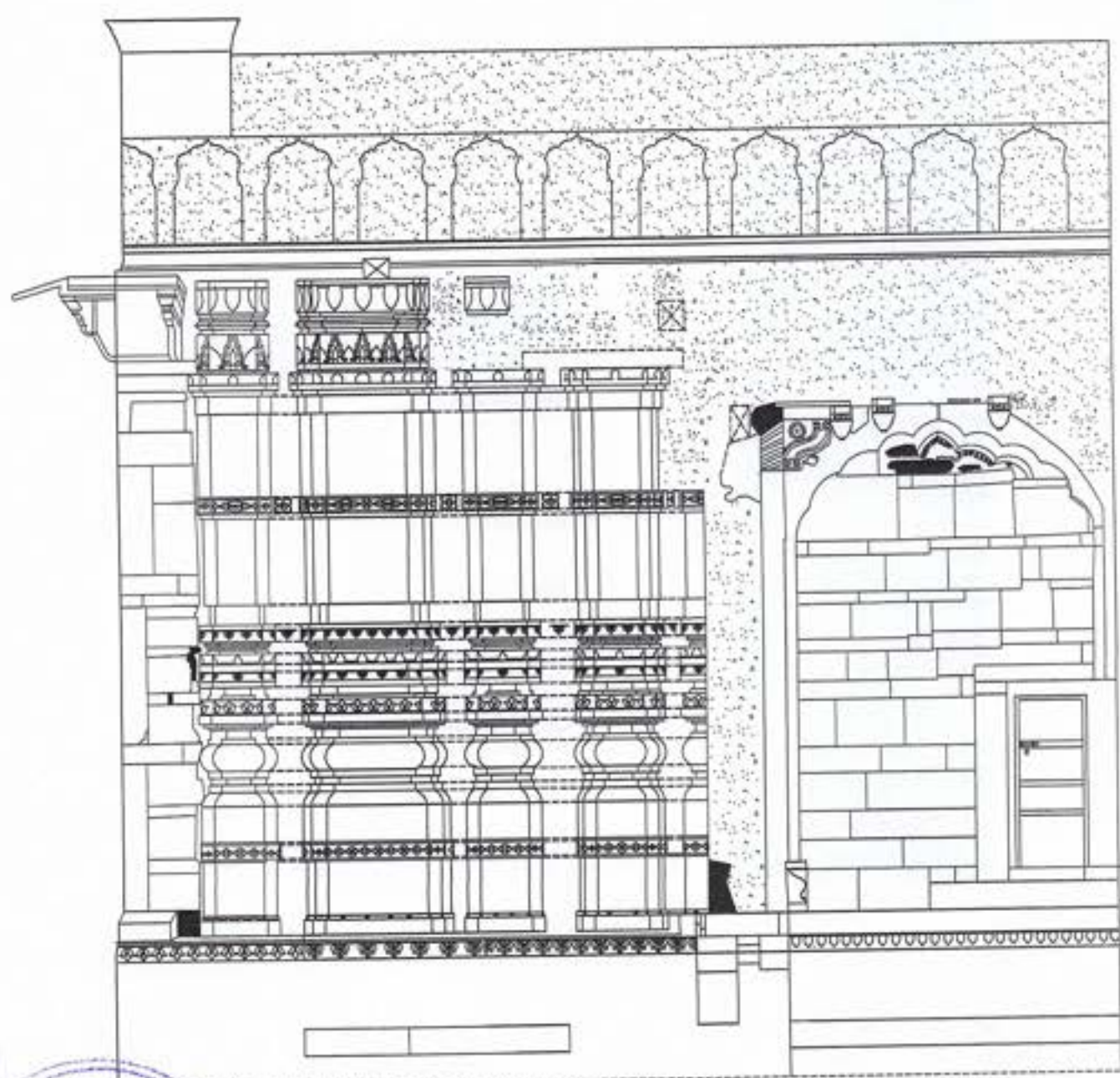
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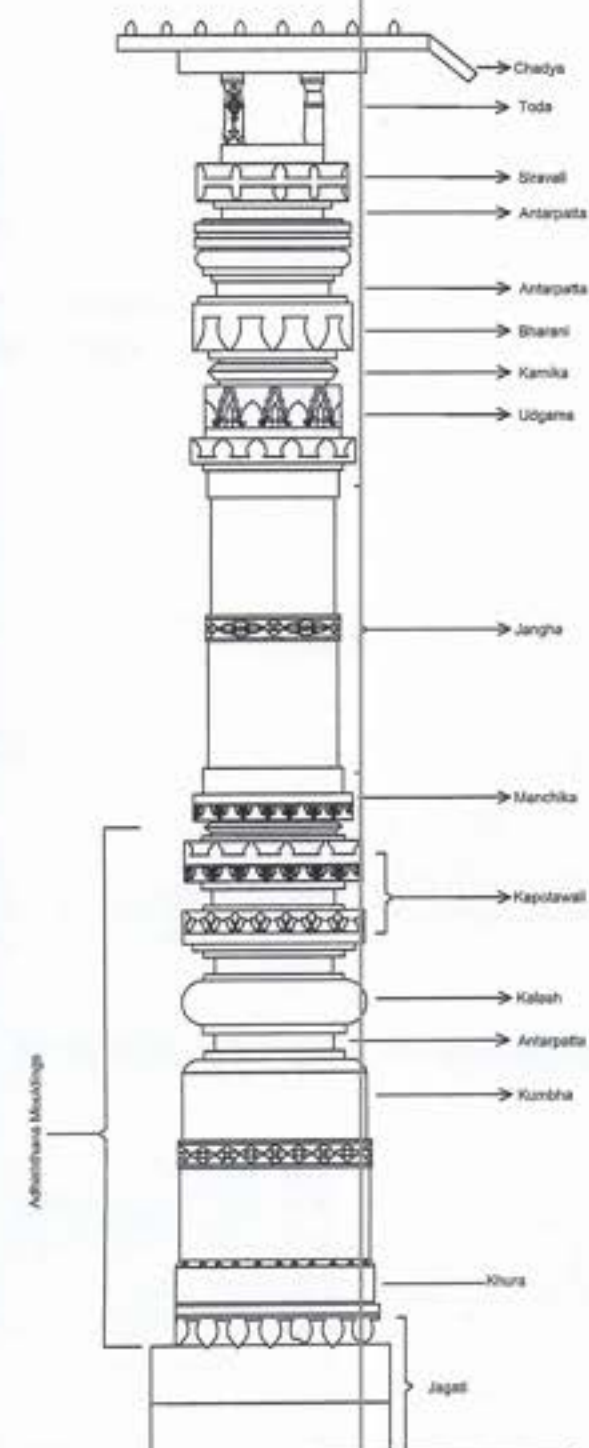
4045T
835

Northwest Side
(Wall Facing West)



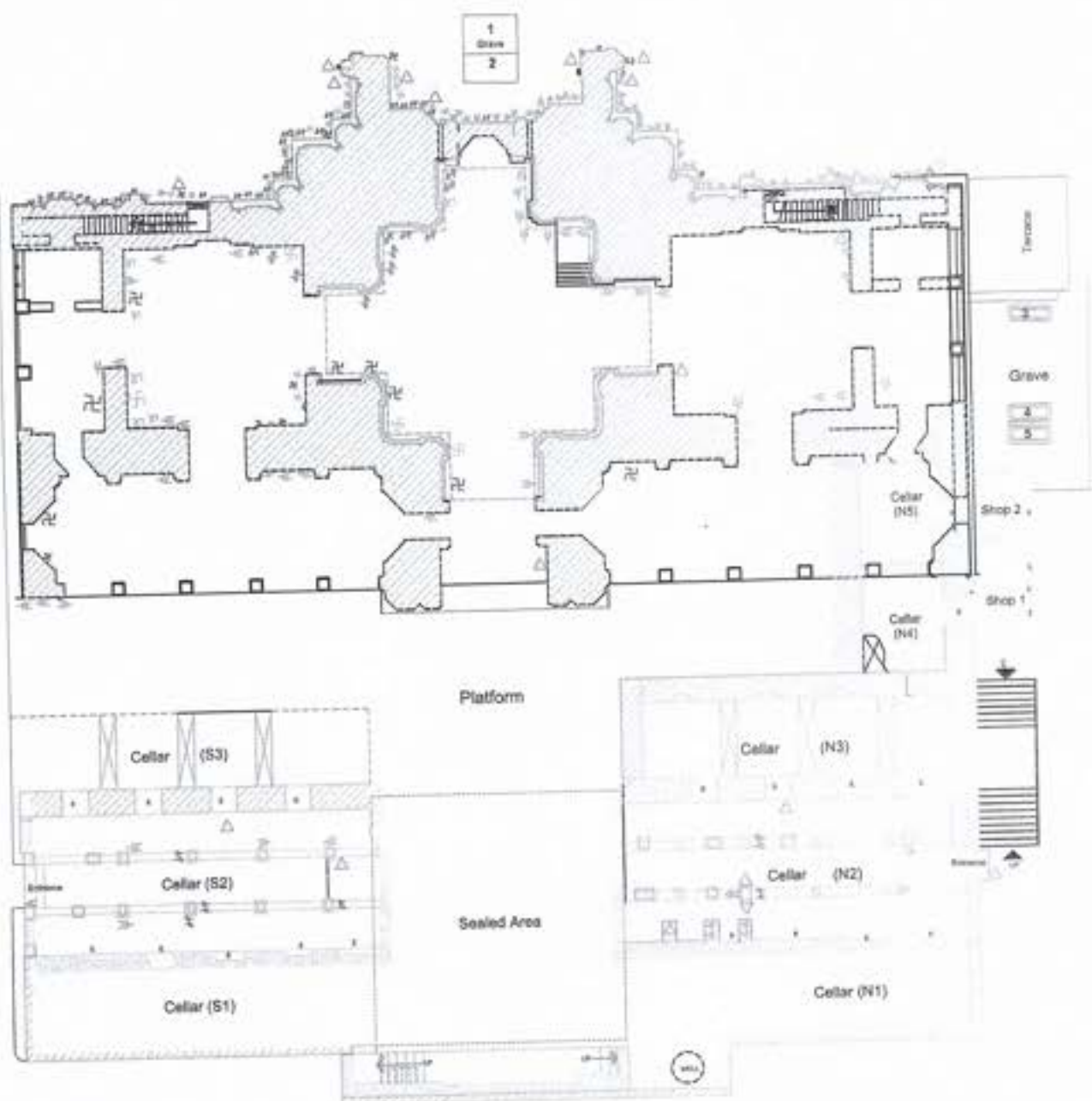
Settlement Plot No. 9130, Varanasi
Mouldings of Western Wall

404T
236



Settlement Plot No. 9130, Varanasi
Indicative Location of Mason's Marks

4645
837



Index

Mason Marks	ψ	ψ	卐	卐	卐	卐	卐	卐	卐
Inscription	△								



Mason's Marks on Western Wall (1)



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838



404-7
839

Mason's Marks on Western Wall (2)



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Checked by -
Preeti Tripathi
Word Abbrev
- 15000



प्रतिलिपि
25-12-24
प्रधान प्रतिलिपि
देवानी न्यायालय धारण

5/1/25

